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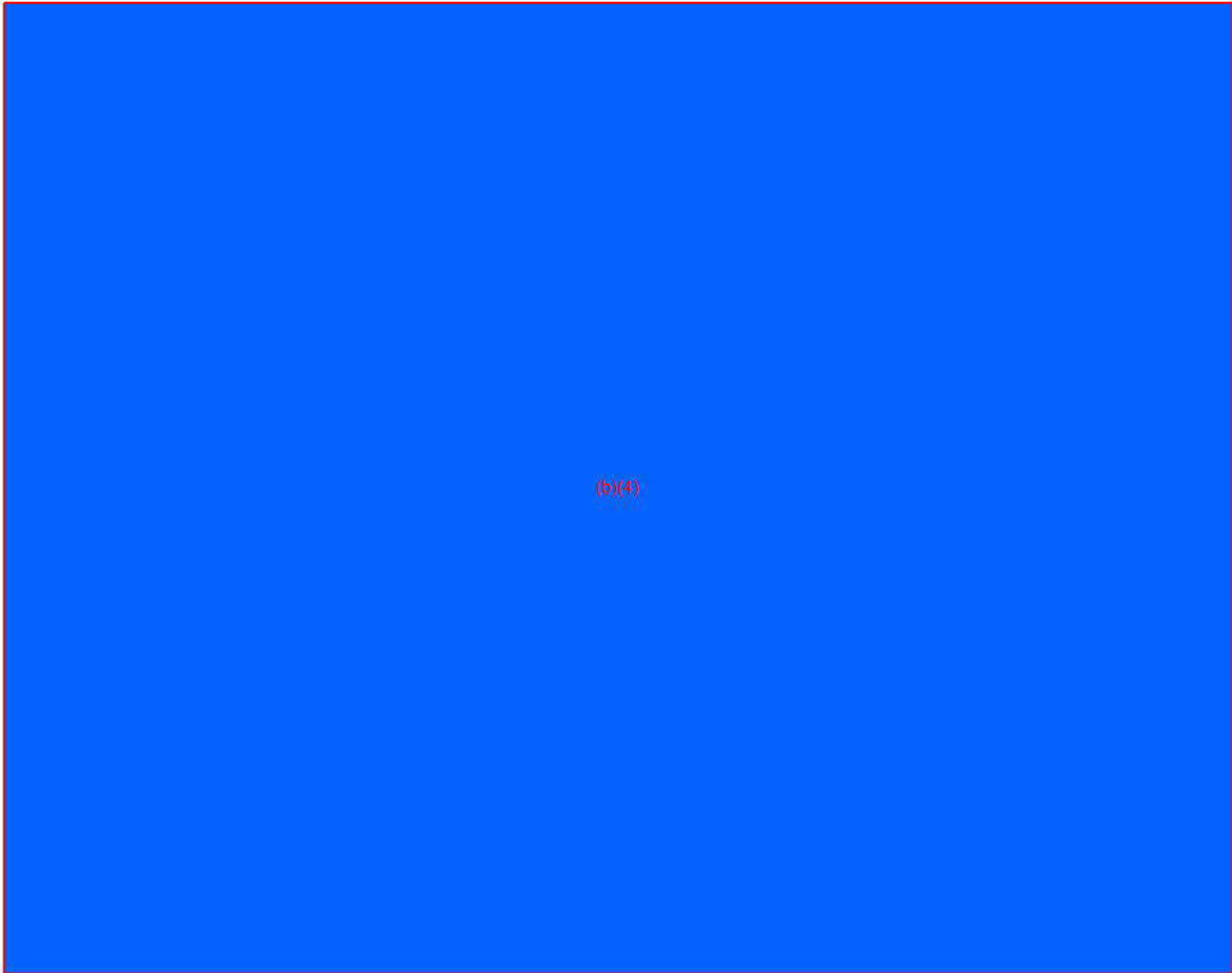
**From:** Walensky, Rochelle (CDC/OD) <[aux7@cdc.gov](mailto:aux7@cdc.gov)>

**Sent:** Friday, October 8, 2021 12:33 PM

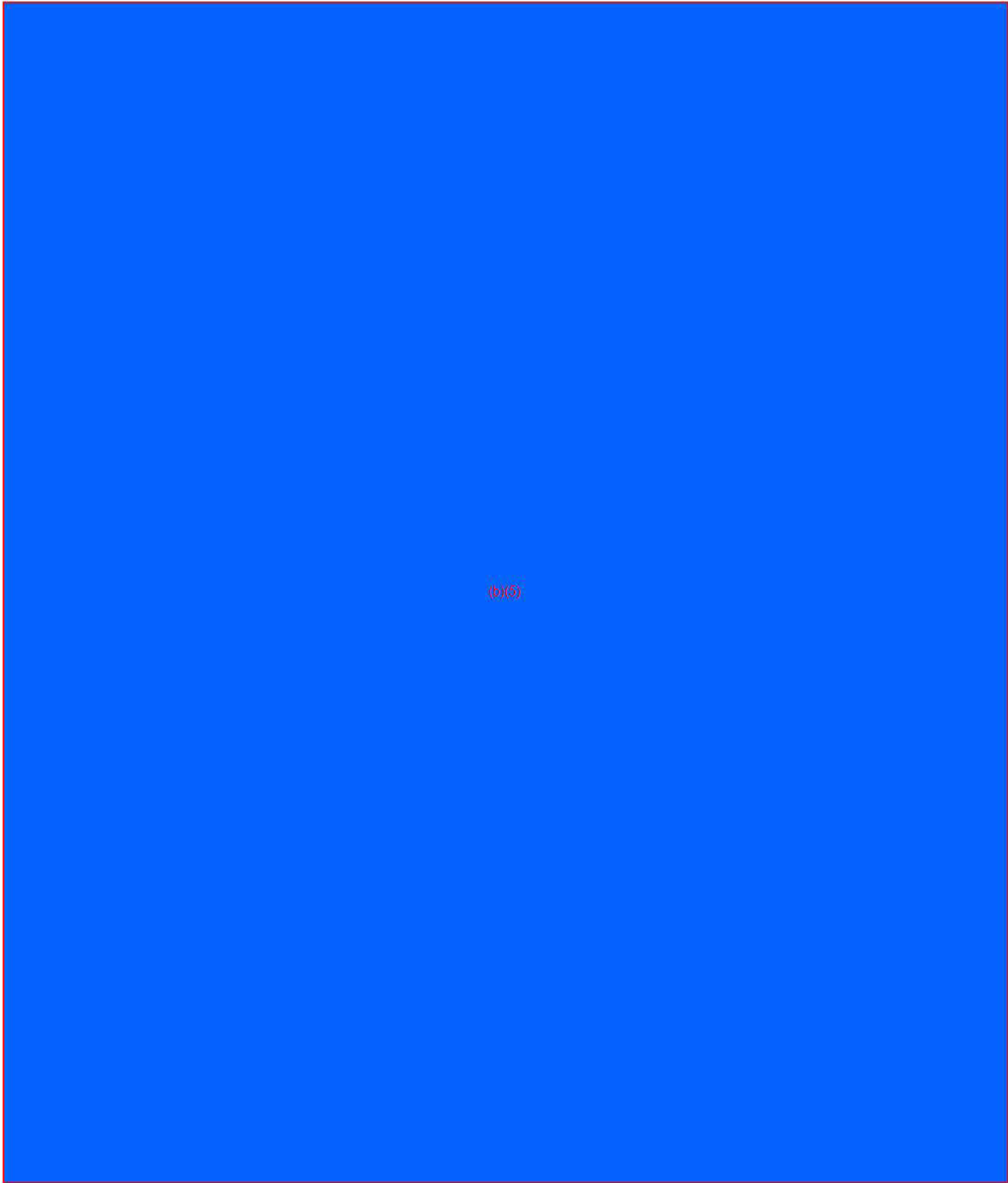
**To:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>; Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>

**Subject:** Of interest

[Covid Immunity Through Infection or Vaccination: Are They Equal? | Kaiser Health News \(khn.org\)](#)



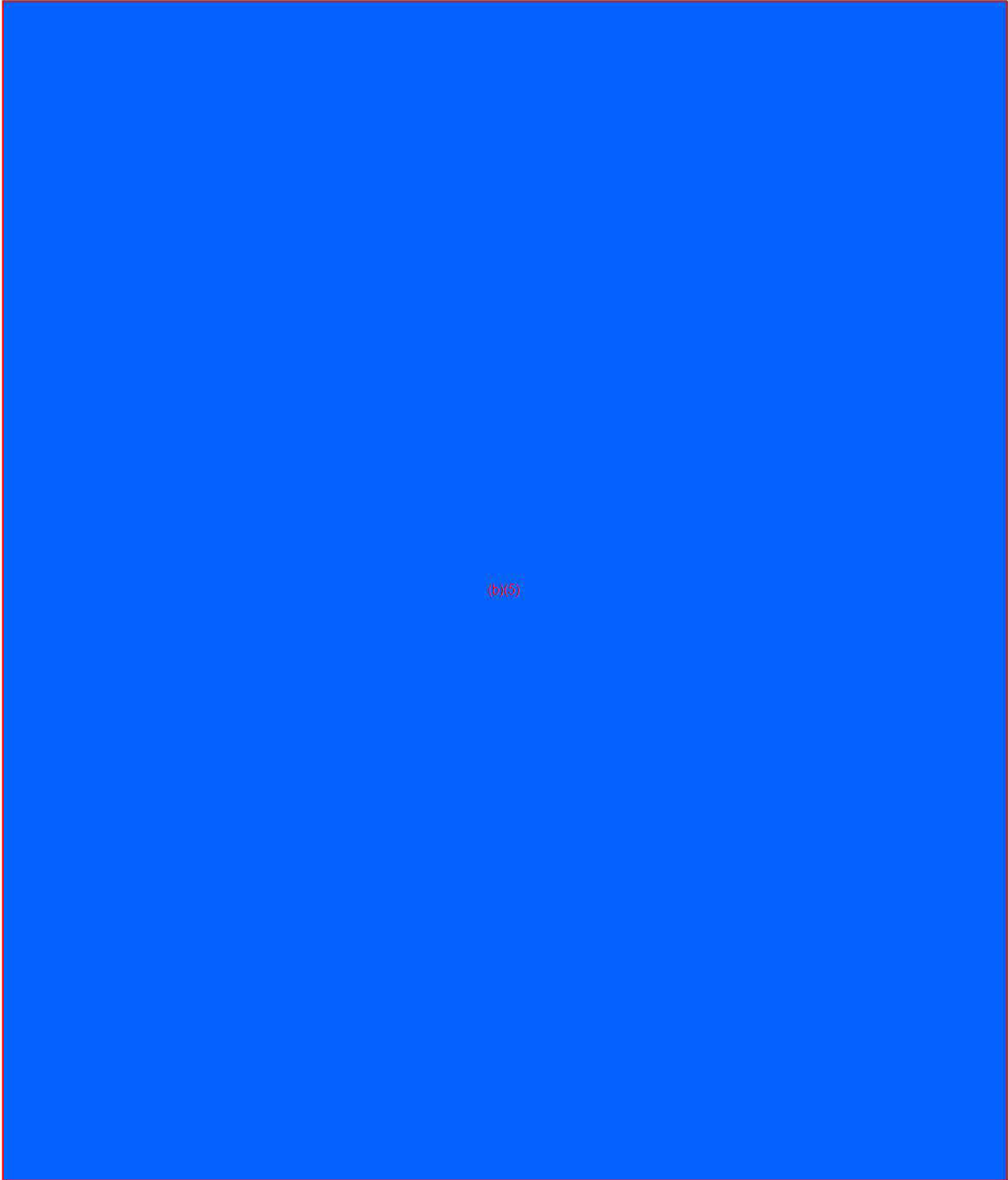
Disclaimer: This article is a preliminary work, and has not undergone peer review. While all data, calculations, tables and figures have been reviewed by the authors, errors and omissions may be present in this draft, and should not guide clinical practice or decision making. The article represents solely the work of the authors, and do not represent the views of their affiliated organizations. Updated and revised versions will be forthcoming.



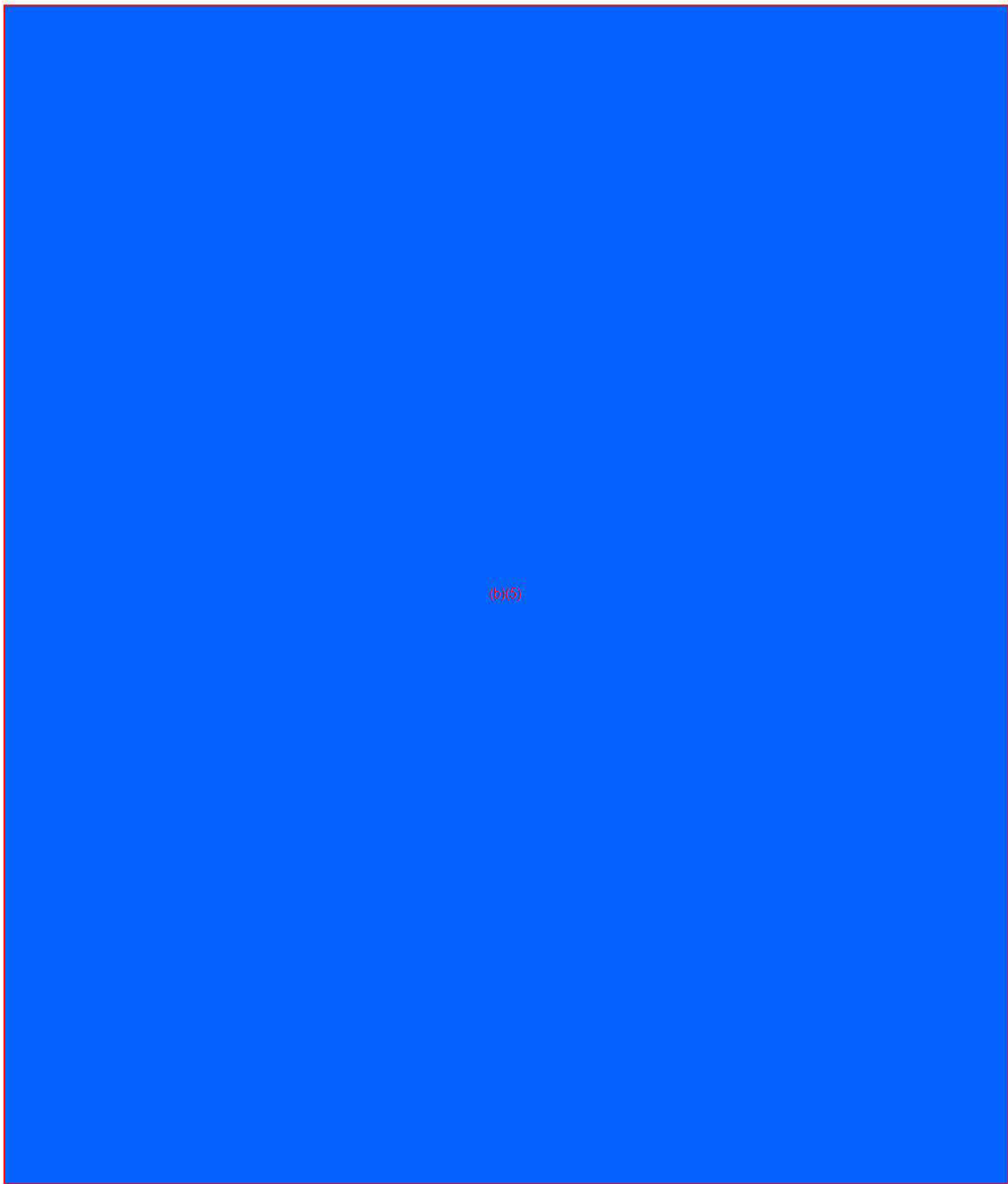
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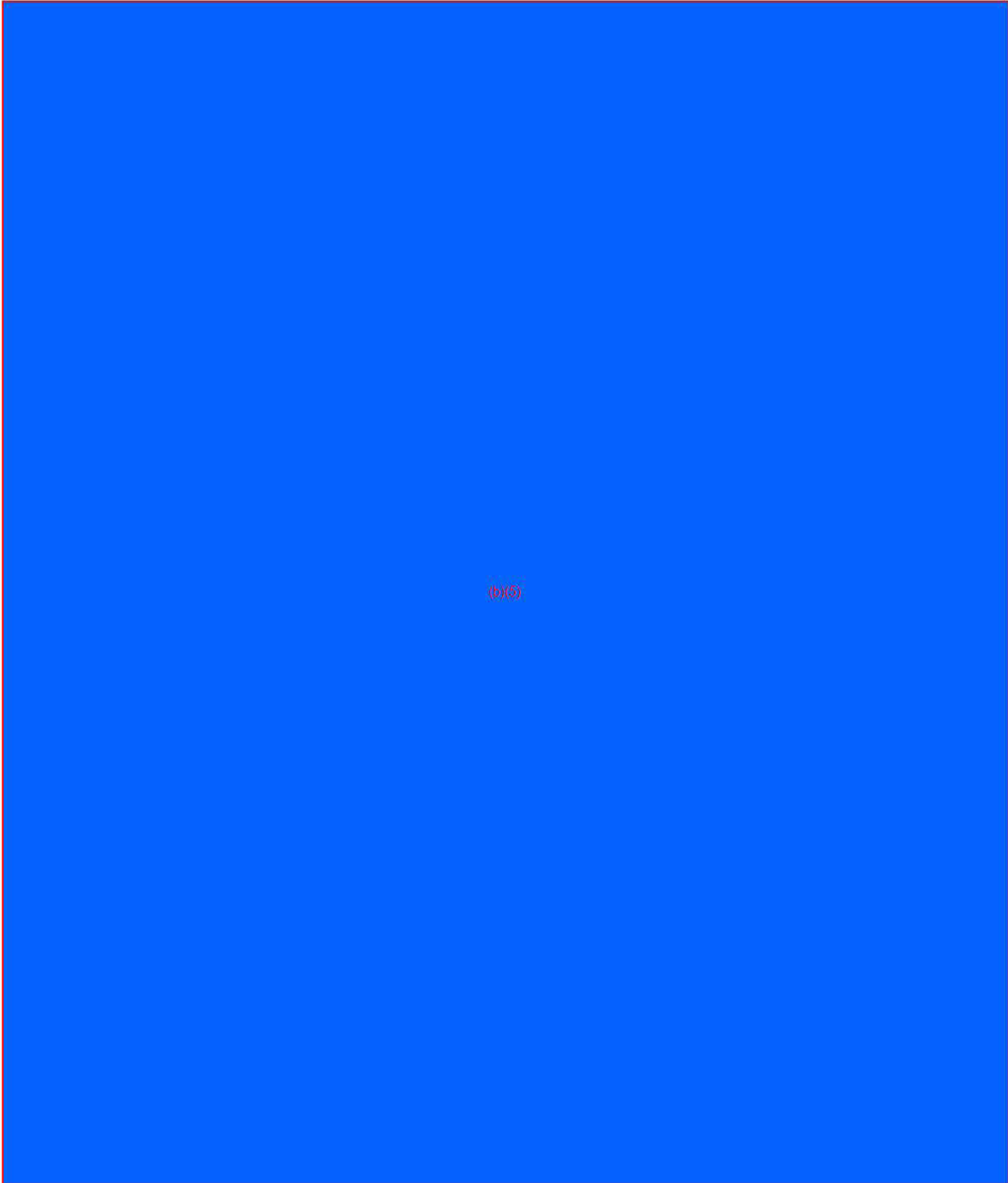


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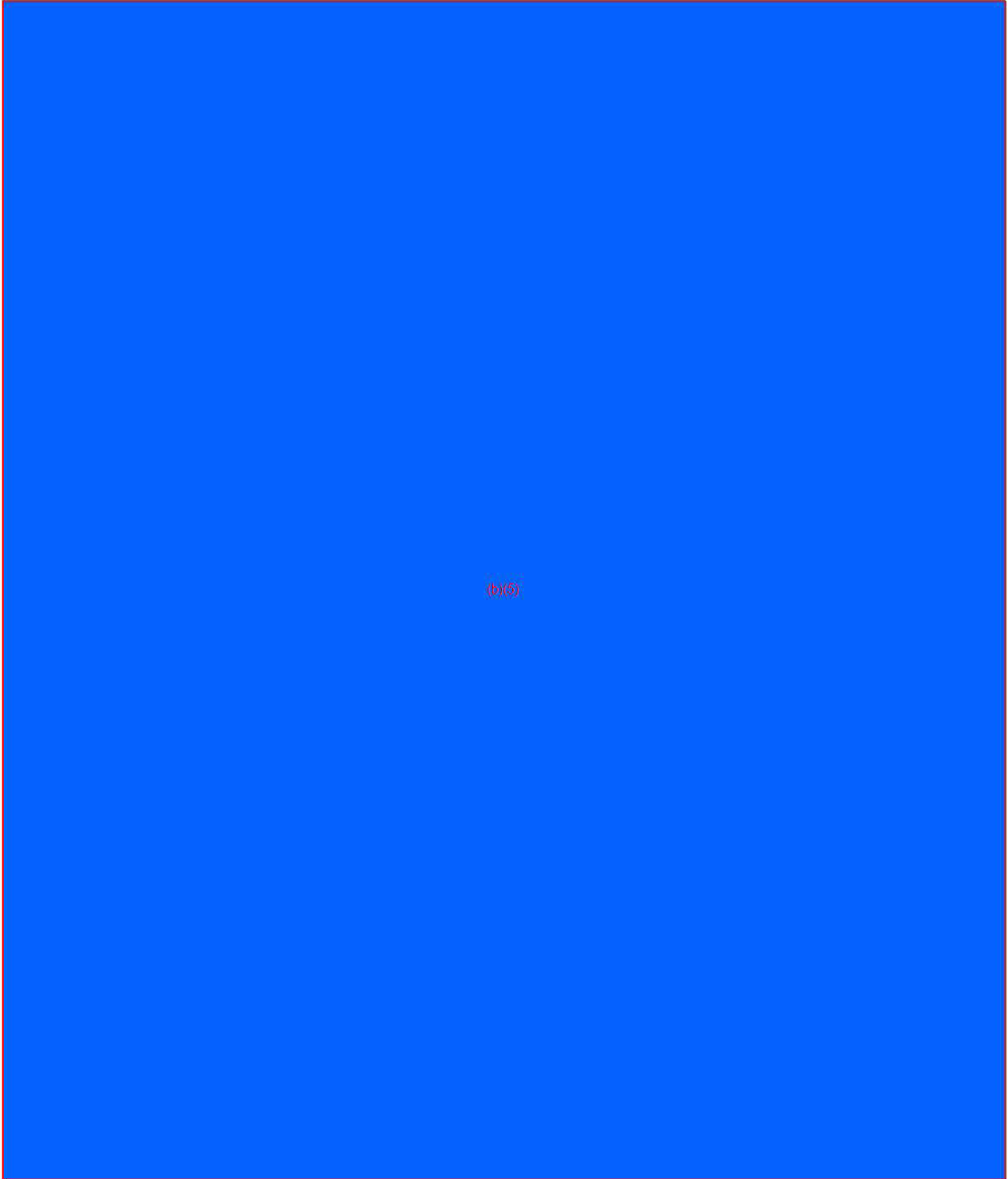


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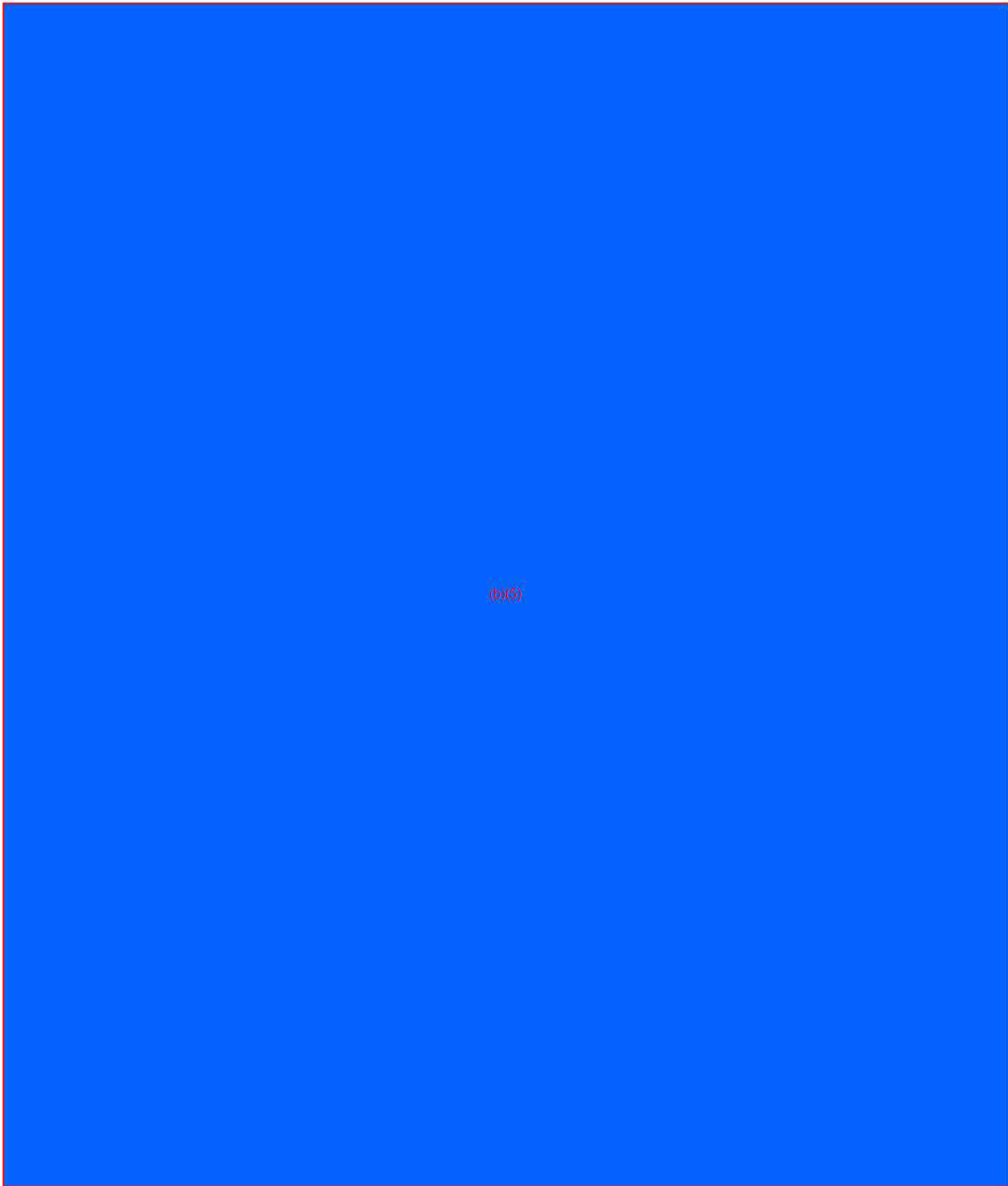
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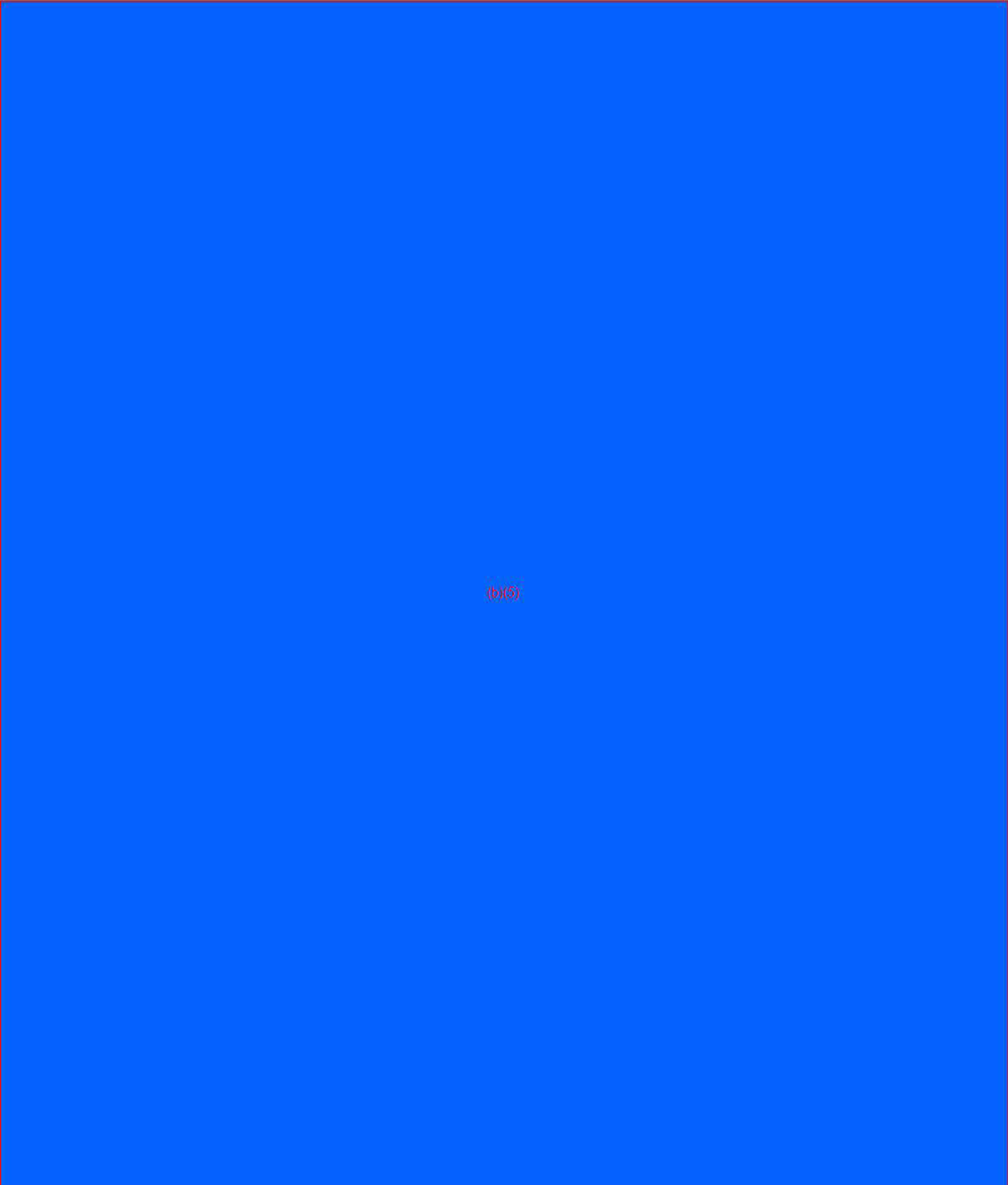
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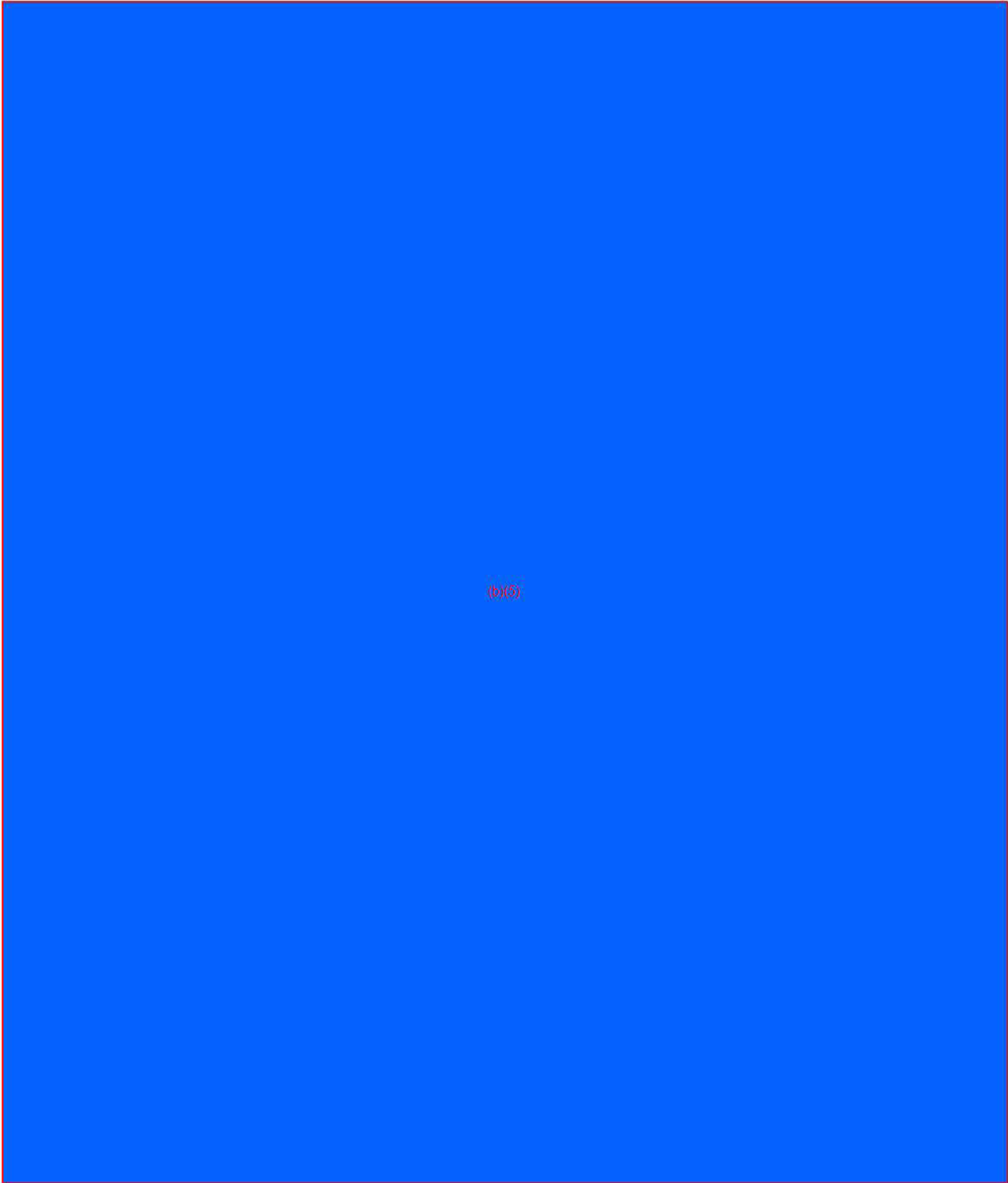


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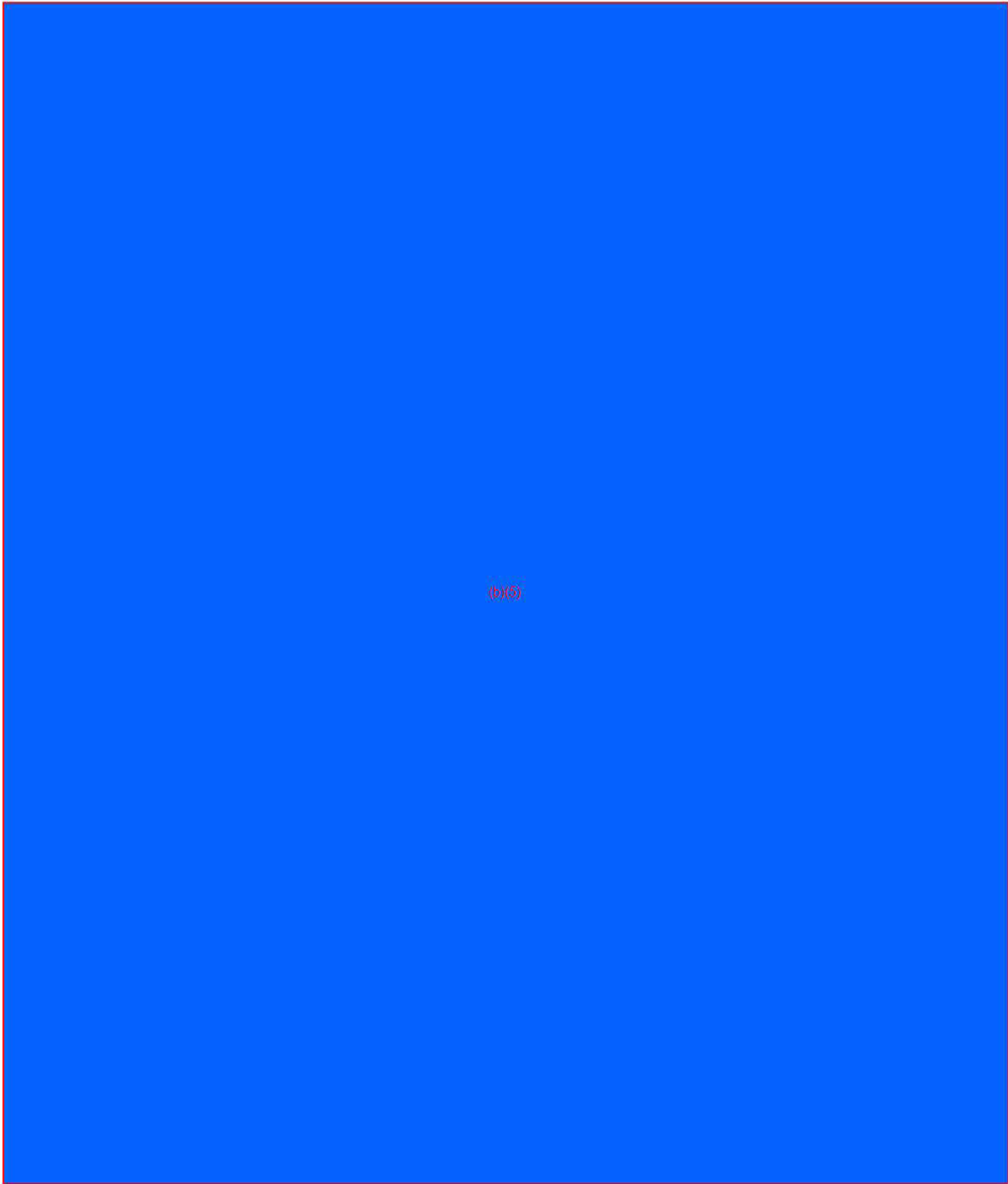
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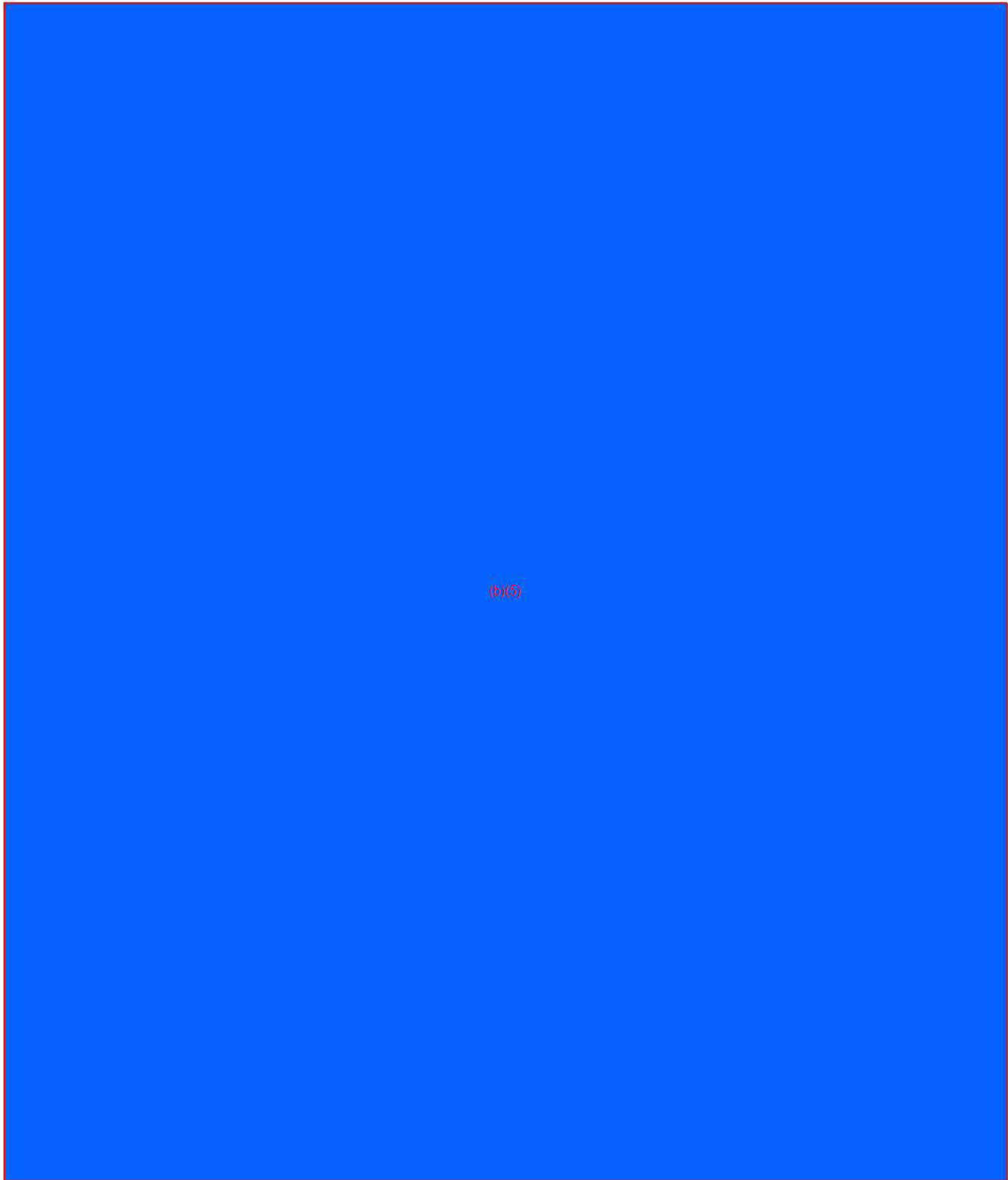
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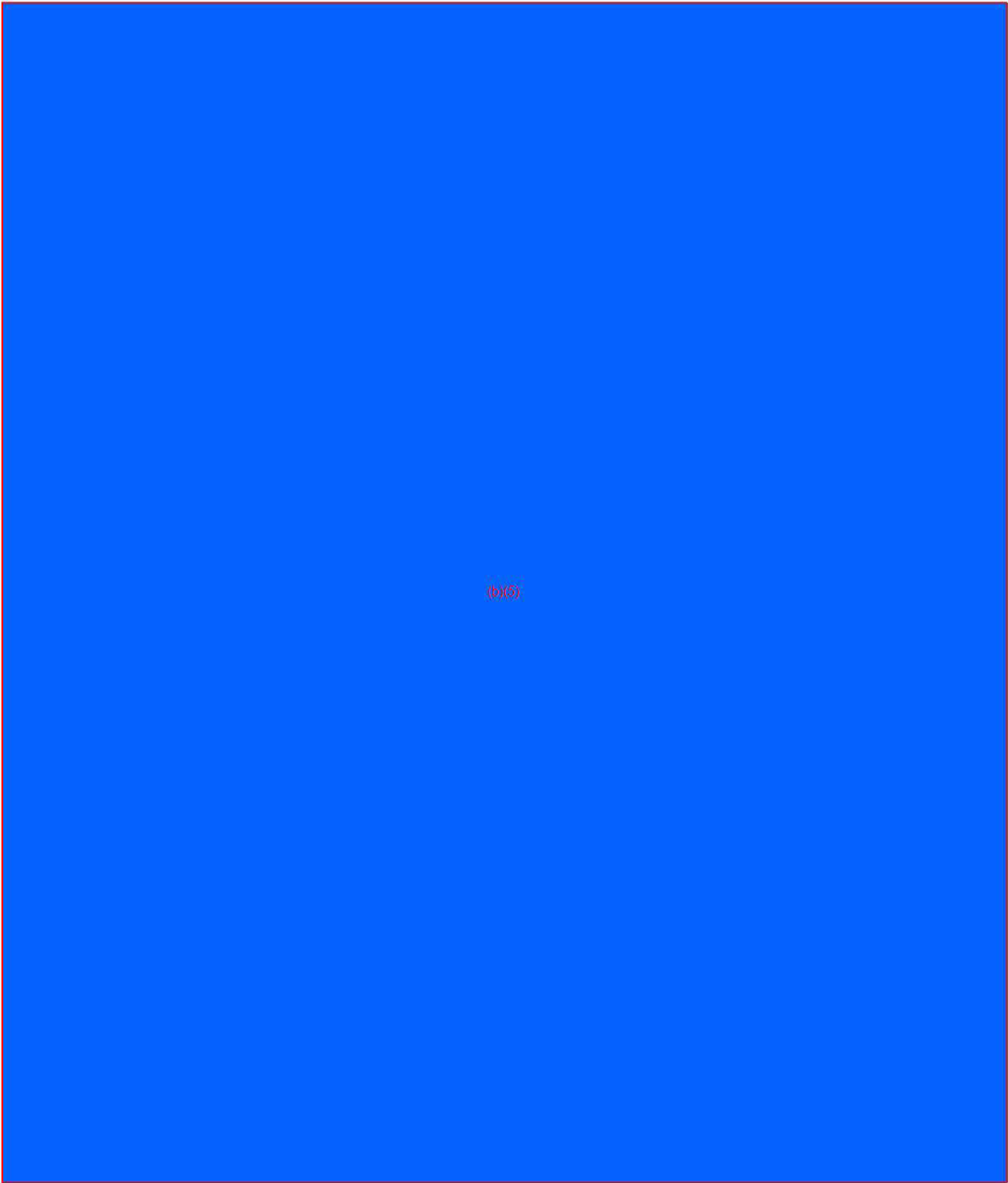
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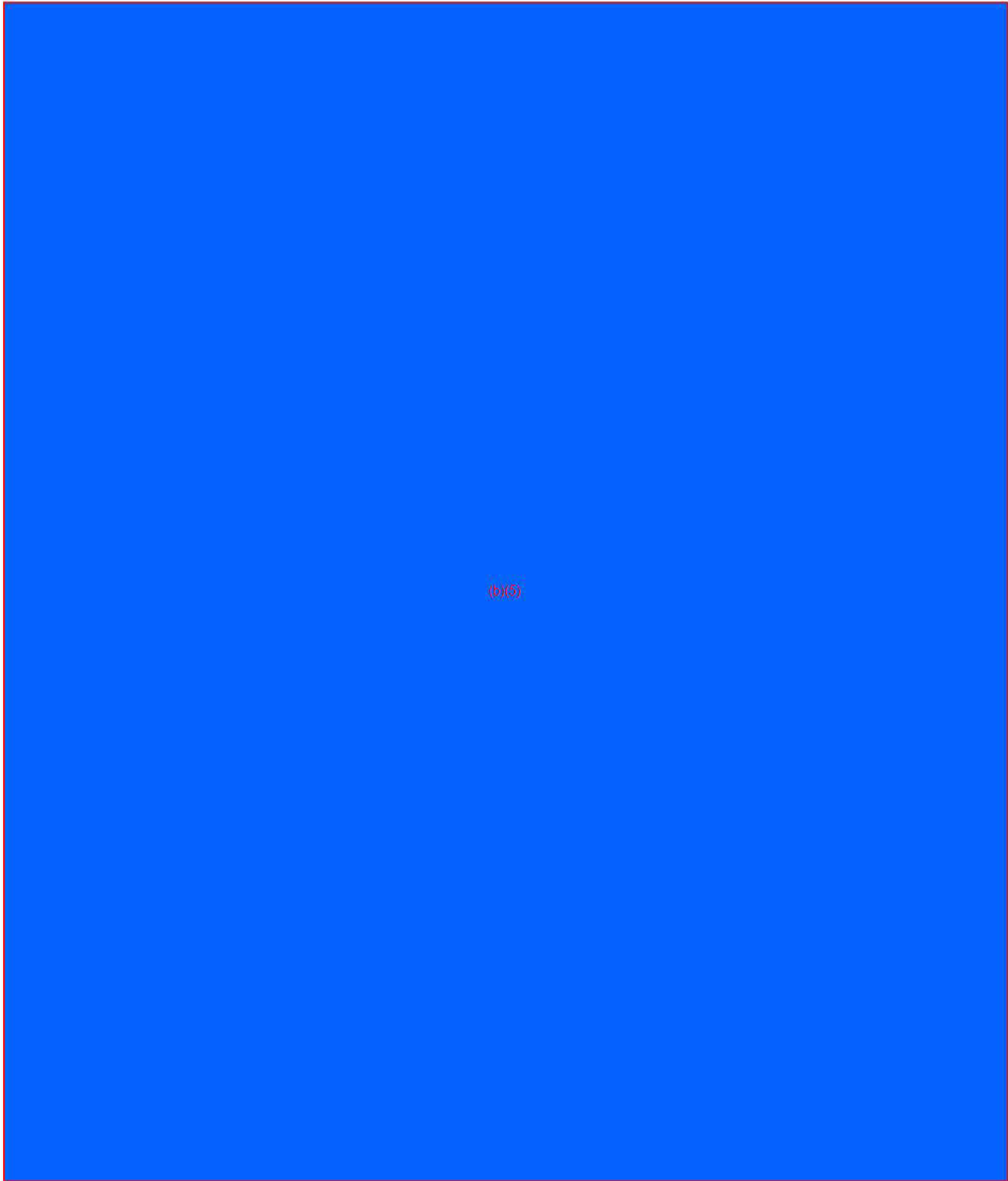
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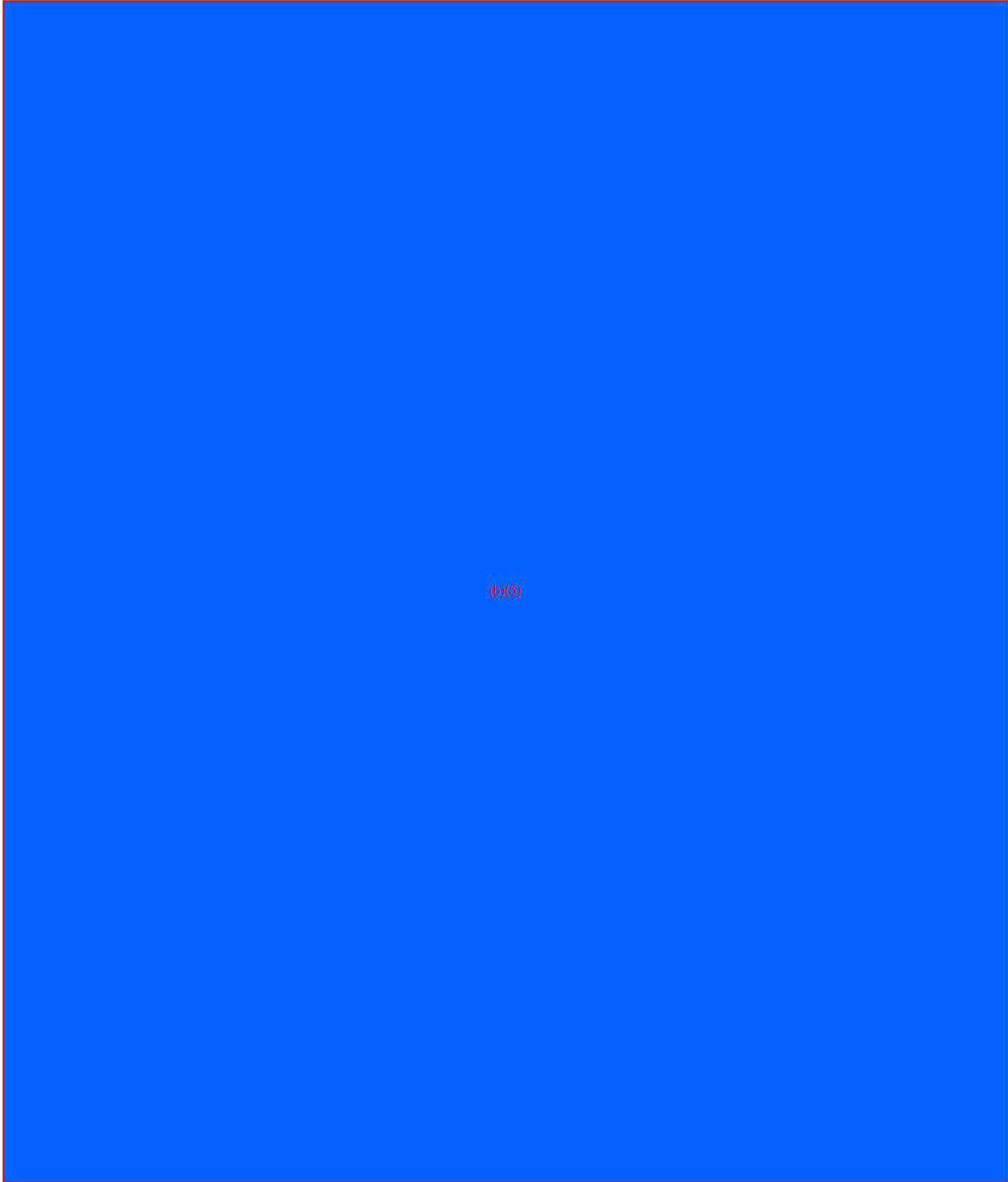
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**From:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>  
**Sent:** Friday, October 8, 2021 12:49 PM  
**To:** Walensky, Rochelle (CDC/OD) <[aux7@cdc.gov](mailto:aux7@cdc.gov)>; Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>  
**Subject:** RE: Of interest

Thanks – a good one!

John T. Brooks, MD  
Senior Science Advisor  
CDC Emergency COVID-19 Response  
404-428-3013 and [zud4@cdc.gov](mailto:zud4@cdc.gov)

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**From:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>  
**Sent:** Friday, October 8, 2021 1:04 PM  
**To:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>; Walensky, Rochelle (CDC/OD) <[aux7@cdc.gov](mailto:aux7@cdc.gov)>  
**Subject:** RE: Of interest

Thanks, Rochelle.

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(b)(5)

Barbara

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**From:** Walensky, Rochelle (CDC/OD) <[aux7@cdc.gov](mailto:aux7@cdc.gov)>  
**Sent:** Friday, October 8, 2021 1:23 PM  
**To:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>; Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>  
**Subject:** RE: Of interest

(b)(5)

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**From:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <zud4@cdc.gov>

**Sent:** Friday, October 8, 2021 4:21:35 PM

**To:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <bdm3@cdc.gov>; Walensky, Rochelle (CDC/OD) <aux7@cdc.gov>

**Subject:** RE: Of interest

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(b)(6)

John T. Brooks, MD  
Senior Science Advisor  
CDC Emergency COVID-19 Response  
404-428-3013 and [zud4@cdc.gov](mailto:zud4@cdc.gov)

**From:** Mahon, Barbara (CDC/DDID/NCIRD/OD)  
**Sent:** Fri, 8 Oct 2021 18:02:21 +0000  
**To:** Walensky, Rochelle (CDC/OD); Brooks, John T. (CDC/DDID/NCHHSTP/DHP)  
**Subject:** RE: Of interest

yup

**From:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP)  
**Sent:** Fri, 8 Oct 2021 20:21:35 +0000  
**To:** Mahon, Barbara (CDC/DDID/NCIRD/OD); Walensky, Rochelle (CDC/OD)  
**Subject:** RE: Of interest  
**Attachments:** Shenai 2021 - equivalency of protection from natural immunity in COVID-19 recovered versus fully vaccinated persons a systematic review and pooled analysis - medRxiv.pdf

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**From:** Walensky, Rochelle (CDC/OD)  
**Sent:** Sat, 9 Oct 2021 11:42:07 +0000  
**To:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP); Mahon, Barbara (CDC/DDID/NCIRD/OD)  
**Subject:** Re: Of interest

Yes, thank you — John —

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R

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**From:** Houry, Debra E. (CDC/DDNID/NCIPC/OD) <vjz7@cdc.gov>  
**Sent:** Friday, October 8, 2021 8:21 PM  
**To:** King, Brian a. (CDC/DDNID/NCCDPHP/OSH) <iyn3@cdc.gov>  
**Subject:** paper we chatted about

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As you and I discussed do think

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(b)(5)

Deb Houry, MD, MPH  
Acting Principal Deputy Director  
Centers for Disease Control and Prevention

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**From:** King, Brian a. (CDC/DDNID/NCCDPHP/OSH) <iyn3@cdc.gov>

**Sent:** Saturday, October 9, 2021 8:25 AM

**To:** Houry, Debra E. (CDC/DDNID/NCIPC/OD)

**Subject:** Re: paper we chatted about

Will do.

(b)(5)

Brian

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**From:** Houry, Debra E. (CDC/DDNID/NCIPC/OD) <vjz7@cdc.gov>

**Sent:** Saturday, October 9, 2021 8:27 AM

**To:** King, Brian a. (CDC/DDNID/NCCDPHP/OSH) <iyn3@cdc.gov>

**Subject:** Re: paper we chatted about

Perfect thank you

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**From:** Houry, Debra E. (CDC/DDNID/NCIPC/OD) <vjz7@cdc.gov>

**Sent:** Saturday, October 9, 2021 8:27:25 AM

**To:** Walensky, Rochelle (CDC/OD) <aux7@cdc.gov>; Berger, Sherri (CDC/OCOO/OD) <sob8@cdc.gov>

**Subject:** Fwd: paper we chatted about

**From:** Walensky, Rochelle (CDC/OD)

**Sent:** Sat, 9 Oct 2021 12:28:27 +0000

**To:** Houry, Debra E. (CDC/DDNID/NCIPC/OD); Berger, Sherri (CDC/OCOO/OD)

**Subject:** Re: paper we chatted about

Helpful. Thank you...

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**From:** Houry, Debra E. (CDC/DDNID/NCIPC/OD) <[vjz7@cdc.gov](mailto:vjz7@cdc.gov)>  
**Sent:** Tuesday, October 12, 2021 1:13 PM  
**To:** King, Brian a. (CDC/DDNID/NCCDPHP/OSH) <[iyn3@cdc.gov](mailto:iyn3@cdc.gov)>  
**Subject:** RE: paper we chatted about

Just checking to see what the latest is re this  
Hope you had a good weekend

Deb Houry, MD, MPH  
Acting Principal Deputy Director  
Centers for Disease Control and Prevention

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**From:** King, Brian a. (CDC/DDNID/NCCDPHP/OSH) <[iyn3@cdc.gov](mailto:iyn3@cdc.gov)>  
**Sent:** Tuesday, October 12, 2021 1:31 PM  
**To:** Houry, Debra E. (CDC/DDNID/NCIPC/OD) <[vjz7@cdc.gov](mailto:vjz7@cdc.gov)>  
**Subject:** Re: paper we chatted about

(b)(5)

Brian

**From:** Houry, Debra E. (CDC/DDNID/NCIPC/OD)  
**Sent:** Tue, 12 Oct 2021 17:33:43 +0000  
**To:** Walensky, Rochelle (CDC/OD); Berger, Sherri (CDC/OD/OCS)  
**Subject:** FW: paper we chatted about

Deb Houry, MD, MPH  
Acting Principal Deputy Director  
Centers for Disease Control and Prevention

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**From:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <bdm3@cdc.gov>  
**Sent:** Friday, October 8, 2021 3:07 PM  
**To:** Walensky, Rochelle (CDC/OD) <aux7@cdc.gov>  
**Cc:** Berger, Sherri (CDC/OCOO/OD) <sob8@cdc.gov>; Goldstein, Robert (CDC/OD/OADPS) <qyd2@cdc.gov>; Braden, Chris (CDC/DDID/NCEZID/OD) <crb5@cdc.gov>; Honein, Margaret (Peggy) (CDC/DDID/NCEZID/DPEI) <mrh7@cdc.gov>  
**Subject:** infection/vaccination MMWR

(b)(6)

Barbara

*Barbara Mahon, MD, MPH  
Incident Manager  
CDC COVID-19 response  
+1-470-755-9262*

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**From:** Walensky, Rochelle (CDC/OD) <aux7@cdc.gov>  
**Sent:** Friday, October 8, 2021 3:08 PM  
**To:** Salcido, Dorinda (Dori) (CDC/OD) <spe9@cdc.gov>; Berger, Sherri (CDC/OCOO/OD) <sob8@cdc.gov>  
**Subject:** FW: infection/vaccination MMWR

FYI

**From:** Walensky, Rochelle (CDC/OD)  
**Sent:** Fri, 8 Oct 2021 19:08:04 +0000  
**To:** Mahon, Barbara (CDC/DDID/NCIRD/OD)  
**Cc:** Berger, Sherri (CDC/OCOO/OD); Goldstein, Robert (CDC/OD/OADPS); Braden, Chris (CDC/DDID/NCEZID/OD); Honein, Margaret (Peggy) (CDC/DDID/NCEZID/DPEI)  
**Subject:** RE: infection/vaccination MMWR

Appreciate the head's up...

R

**From:** Salcido, Dorinda (Dori) (CDC/OD)  
**Sent:** Fri, 8 Oct 2021 19:12:48 +0000  
**To:** Walensky, Rochelle (CDC/OD); Berger, Sherri (CDC/OCOO/OD)  
**Subject:** RE: infection/vaccination MMWR

Thank you.

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**From:** Womack, Caryn M. (CDC/DDID/NCIRD/OD)  
**Sent:** Fri, 8 Oct 2021 15:29:58 +0000  
**To:** Honein, Margaret (Peggy) (CDC/DDID/NCEZID/DPEI); Novak, Ryan (CDC/DDID/NCIRD/DBD); Brooks, John T. (CDC/DDID/NCHHSTP/DHP); Walensky, Rochelle (CDC/'gregorsmith@nes.scot.nhs.uk'; 'Sarah.Muhsen@dhsc.gov.uk'; Bialek, Stephanie R. (CDC/DDID/NCIRD/DVD); Nerses, Katherine (CDC/DDPHSIS/CGH/OD); Marston, Barbara J. (CDC/DDPHSIS/CGH/DPDM); Daskalakis, Demetre (CDC/DDID/NCHHSTP/DHP); 'nick.gent@phe.ξ Goldstein, Robert (CDC/OD/OADPS); Jernigan, John A. (CDC/DDID/NCEZID/DHQP); Cohn, Amanc (CDC/DDNID/NCBDDD/DBDID); 'nachmana@moh.gov.il'; 'sharon.alroy@MOH.GOV.IL'; 'nachmana@MOH.HEALTH.GOV.IL'; 'eric.haas@MOH.GOV.IL'; 'noa.triki@moh.health.gov.il'; De Marie A. (CDC/NIOSH/OD); Harries, Jenny; 'Kirsty.Mackenzie@gov.scot'; Mahon, Barbara (CDC/DDID/NCIRD/OD); Gregor.Smith@gov.scot; Perrine, Cria G. (CDC/DDNID/NCCDPHP/DNPA( Frank.Atherton@gov.wales; Geoghegan, Lourda; Meera Chand; Christie, Athalia (CDC/DDPHSIS/CGH/OD); Meng.Khaw@wales.nhs.uk; Clark, Thomas A. (CDC/DDID/NCIRD/DVD) Braden, Chris (CDC/DDID/NCEZID/OD); Dowell, Deborah (Debbie) (CDC/DDNID/NCIPC/DOP); CD AV/Communications; Hicks, Lauri (CDC/DDID/NCEZID/DHQP); Pye, Evan (CDC/DDPHSIS/CGH/OC Griffin, Johnny (CDC/DDPHSIS/CPR/DEO); Corbell, Derek J. (CDC/DDPHSIS/CPR/DEO) (CTR); Wait Thomas; Patel, Pragna (CDC/DDPHSIS/CGH/DGHT); אסנת לוקסנבורג ד'ר; Hall, Aron (CDC/DDID/NCIRD/DVD); Prasher, Joanna (CDC/DDPHSIS/CPR/OD); McBride, Michael; אקסלרוד ה Pao, Leah (CDC/DDPHSIS/CGH/DGHP); טל מורגנשטיין; 'Jim McMenamin'; Anderson, Mark (CDC/DDPHSIS/CGH/DGHP); Keren Shurkin; Behrooz.Behbod@gov.wales; Layden, Jennifer (CDC/DDPHSS/OS/OD); Fox, Kimberley (CDC/DDID/NCIRD/DBD); Ayling, Maximilian  
**Subject:** Israel-UK-US CDC COVID Joint Discussion Notes (October 1, 2021)  
**Attachments:** Israel-UK-US CDC COVID Joint Discussion Notes 2021 10 01.pdf

All,

Please see attached notes from the October 1 Israel-UK-US CDC COVID-19 Joint Discussion.

The next call is scheduled for Friday, October 15, 2021 at 7:00am EST.

Thank you,

**Caryn Womack**

CDC COVID-19 Response  
IM Special Projects Advisor

[JKQ0@cdc.gov](mailto:JKQ0@cdc.gov)

Office: 404.639.0403 | Mobile: 404.698.8300

Joint Discussions: Israel-UK-US CDC Minutes	
Date	Friday, 10/01/2021
Time	7:00 a.m. – 8:00 a.m. EST

## United Kingdom Health Security Agency

### Broad Image

#### Speaker: Jenny Harries

- Epidemiology in UK at moment is fairly static overall
- Seeing rises in cases children (mostly mid-teenager range), though not translating into hospital admissions
- Have recently extended vaccine program to 12- to 15-year-olds
- Hospitalization rates starting to look more positive
- Note: First day as “UK Health Security Agency”

#### Presenter: Thomas Waite

- High overall number of cases, skews to younger people, looking more positive in older populations
- Seeing case rise since schools recently went back in England and Wales
  - More pronounced rise in secondary school age groups
- Test positivity and test rates are going up to much greater extent than other European nations have seen
  - Could be a result of the UK only recently opening up vaccine program to younger ages
  - Rises in cases in 35-49 age group could be attributed to school openings
    - Kids are back in school and parents can now go back to work, increasing chance of exposure for both groups who, if they become ill, may then infect those in their household
- Case rates in age 60+ populations have dropped markedly
- Hospitalization rates have stabilized and are down about 25% for daily hospital admissions
- UK starting booster program (seeing a few hundred thousand boosters administered each day)

### Community Testing Vaccine Effectiveness

#### Presenter: Jamie Lopez Bernal

- Vaccine effectiveness studies/data analyses primarily focused on waning effectiveness
- Methodology:
  - Using test-negative case control based on community testing
    - Helps to control for biases around testing behavior
  - Stratified by period after vaccination, by variants, and by different cohorts
- All age analysis of VE against **symptomatic disease**
  - Three different vaccine products (AstraZeneca, Pfizer, Moderna)
    - Delta variant had taken over in UK by the time analysis began, leaving minima follow-up re: Alpha variant
  - Seeing waning effectiveness against symptomatic disease in AstraZeneca and Pfizer recipients (particularly against Delta) ~10 weeks after 2<sup>nd</sup> dose
    - Note Moderna was approved for use later, so substantial data at the 10 week mark after full vaccination is not yet

- All age analysis of VE against **hospitalization**
  - VE well-maintained up to 15 weeks with all products
    - AstraZeneca: Some indication of waning at 20 weeks but well-maintained up to 15 weeks
    - Pfizer: Remains over 90% effective at 20 weeks
- All age analysis of VE against **deaths**
  - Similar pattern as with hospitalization and symptomatic disease
  - AstraZeneca: ~ 80% effective at 20 weeks
  - Pfizer: ~90% effective at 20 weeks
- Data on clinical risk groups
  - Clinically Extremely Vulnerable (CEV) deemed at highest risk of COVID
    - Overall VE is lower in CEV group than non-CEV with both AstraZeneca and Pfizer
      - Seeing more waning effectiveness in CEV group (though with relatively wide confidence intervals)
      - VE relatively steady in non-CEV group, particularly in those who received Pfizer, about 20 weeks after 2<sup>nd</sup> dose
  - Observational data resulting in possible biases that could lead to underestimation of VE/make waning appear greater, including:
    - Previous infection (affects both vaccinated and unvaccinated control group), meaning some level of protection would be based on natural infection
    - Changes to testing policy over time, in particular more widespread use of lateral flow testing prior to PCR testing
      - Likely that false negative PCRs will increase as people only seek testing if lateral flow is positive
    - Different cohorts that have been offered different vaccines at different times
- Duration of PCR positivity by variant/vaccination status
  - Household contact studies conducted to look at transmission rates (analysis still underway)
  - Seeing similar CT values in both vaccinated and unvaccinated cases
  - Duration they remain PCR positive is lower/shorter in vaccinated group
    - Longer duration of positivity with Delta
    - Lower duration of PCR positivity after 1 or 2 doses of vaccine
      - Might suggest that although household transmission may be similar, we may see lower transmission outside of household where you don't have sustained contact
- Summary
  - Evidence of waning against symptomatic disease from approx. 10 weeks after dose 2 – most evident in older adults
  - Protection against hospitalization and death remains high up to 20 weeks in healthy adults, especially with Pfizer
  - Indication of waning of VE against hospitalization from 15 weeks, predominantly in risk groups
  - Evidence of reduced duration of PCR positivity after 1 or 2 doses of vaccine

## Q&A

- Q: John Brooks (US): How are data informing move towards boosters?
- A: Mary Ramsay (UK)
  - Using UK data as well as data from other countries
    - UK is only country using AstraZeneca, which is showing to be less effective over time than Pfizer, which helped UK be more certain of the decision to boost



- Policy pressure played a role in decision
- Unvaccinated persons are still a priority
- Started booster program last Wednesday (September 22)
  - Minimum of 6 months post-2<sup>nd</sup> dose
  - Persons as young as 50 are eligible (some between 50-64 who are otherwise healthy may not have a true need for a booster at this time, but still providing the option amidst any concerns)

## Israeli Ministry of Health

### Broad Image

#### Speaker: Nachman Ash

- Israel continuing to provide booster vaccine
  - ~3 million people (across all age groups) have received boosters
- Overall case count decreasing
- Most schools were closed in September (or open very few days)
  - Arab population schools were open
  - Seeing a rise in number of cases in Arab population, generally in younger children (likely as a result of going back to school)
- Continue with primary vaccination process

### Booster Protection Across Ages

#### Presenter: Ron Milo

- Large majority of elderly population (90% of those who were eligible) has received a 3<sup>rd</sup> dose
- Persons as young as 16 now eligible for boosters, about half that eligible population has gotten their booster
- Following booster approval and administration
  - A decrease in confirmed infections was specifically observed among people aged 60+
  - Incidence of illness continued to rise for those above age 60 (not receiving booster)
  - Number of “severe” cases nationwide decreased sharply
- Nationwide decrease in frequency of positive tests began only after boosters were administered to most age groups
  - In order to see the significant nationwide decrease in cases, there was a need for a booster dose for other age groups, not just 60+
- Analysis of adult Israeli population (4.6 million people)
  - In study period (August and September of 2021)
    - 100,000 confirmed infections, more than 1,000 severe illnesses
  - Have updated analysis of protection against confirmed infection as a function of time post-vaccination in ages 60+ (smaller confidence interval)
    - Looking at period from about 12 days after receipt of booster onward
    - Greater level of protection when comparing 3<sup>rd</sup> dose to 2<sup>nd</sup> dose
      - After adjusting for age, gender, demographics, geography
  - Data now available for 50-59 age group
    - Don’t have a 45-day follow-up period yet

- Booster protection against **confirmed infection** as function of time post vaccination by age group
  - Rate ratio day 12+ relative to non-booster with 95% CI
    - 60+: 12.5
    - 50-59: 12.5
    - 40-49: 9.8
    - 30-39: 8.6
    - 16-29: 18.3
  - Not sure why protection is not changing monotonically in youngest age group, but good protection is shown across the board in all age groups
  - Absolute rates of confirmed infections showed sharp decrease (10-fold) with booster
  - Results were tested by various methods, including matching of booster-vaccinated people with corresponding 2-dose vaccinated individuals, temporal comparison within the booster cohort (removing effect of those who chose to remain with 2<sup>nd</sup> dose)
  - Seeing little effect on confirmed infection 3-7 days post-vaccination vs 12+ days post-vax when we see big improvements
- Booster protection against **severe illness** is significant in age 60+ populations and 40-60 age groups
  - Rate ratio for severe cases day 12+ relative to non-booster (95% CI)
    - 60+: 18.9
    - 40-59: 21.3
    - Not enough cases to compare rates of severe disease in 16-39
- Also completed secondary analysis
  - The details of the conservative approach can be seen here: <https://www.nejm.org/doi/pdf/10.1056/NEJMoa2114255?articleTools=true>
- Booster protection against **death**
  - 60+: Seeing ~12 deaths in booster group as compared to 200 deaths in non-booster group (9.8-fold reduction)
    - More conservative method showed about 3.7-fold improvement
- Seeing about 10-fold protection overall against severe disease and death
- July and August saw rapid increase in infections (about 60%) in vaccinated persons people who had surpassed 6 months since their 2<sup>nd</sup> dose
  - Considerations: rise in Delta variant and waning VE
- In Sept, following 3<sup>rd</sup> dose, infections decreased and were mostly in unvaccinated
  - In Sept, following 3<sup>rd</sup> dose, mostly unvaccinated became severe cases

## Q&A

- Q: Rochelle Walensky (US): Are there concerns that after a 3<sup>rd</sup> dose, recipients might feel invincible/want to relax their adherence to NPIs?
  - Need to convey that immunity will be better, but not perfect
    - Seeing that there are breakthroughs with 3<sup>rd</sup>, what are CT value data? What do we know about transmissibility of breakthroughs with increased protections?
- A: Ron Milo (Israel)
  - Looking at CT is doable on short timescale; Israel can present at next meeting
  - For transmissibility, number of cases is not that high; not certain they have statistical power to determine



- Q: Mary Ramsay (UK): Slightly disappointing that we don't see major nationwide effect on case counts until younger populations receive a booster. Would like to see the data numerically vs as a proportion, to show that severe illness and hospitalizations are still expected to decrease
- A: Ron Milo (Israel)
  - Ron will reach out to Mary over email to discuss
  - Don't want to give impression that they didn't see an effect at population level until they got to younger age groups
    - Even with age 60+ were seeing decreases

## United States Centers for Disease Control and Prevention (CDC)

### Broad Image

#### Speaker: John Brooks

- U.S. in its 4<sup>th</sup> COVID wave
- Case rates and hospital admissions are decreasing
- Number of deaths beginning to decrease
- 55% of adult population fully vaccinated
- Robust number of people accessing boosters but don't have data yet as we just opened
  - Just approved boosters last week; substantive data not available yet
  - Several hundred thousand received boosters in first few days of availability
- Like Israel and UK, continue to see large rise in pediatric cases (dominating case rates), though overall case counts are decreasing
- Delta variant is completely dominant
- U.S. has large vaccine-hesitant population
  - Have seen extraordinary increase in people accessing monoclonals

### Comparison of protection from infection-induced immunity as compared to vaccine-induced immunity against adult hospitalizations (VISION Network Data)

#### Presenter: Mark Thompson

- Methodology
  - VISION Network: 7 partners in 9 states with >20million source population
  - Eligible hospitalizations
    - Adults aged 18 and older after general availability of vaccine to each age group
    - COVID-19-like illness (from ICD codes)
    - SARS-CoV-2 molecular testing (within 14 days or 72 hours after admission)
    - Tested for SARS-CoV-2 at least once since Feb 2020 before hospitalization
  - Contrasting exposure groups
    - Documented infection (more than 90 days before hospitalization) and unvaccinated
- Results
  - 18,397 2-dose mRNA vaccinated persons without prior documented infection
    - 542 positive COVID tests amongst the group (3%)
  - 2,085 unvaccinated persons with a prior SARS CoV-2 infection
    - 130 positive tests (6.2%)
    - Unvaccinated with prior infection had 2.75 greater odds of infection
  - Similar effect when more recently vaccinated patients are excluded
  - Marginally higher effects for Moderna vaccine, adults aged 65 and older, and hospitalizations before Delta wave
- We are seeing that the odds of infection are greater with natural-only immunity

## Q&A

- Q: Peggy Honein (US): Does VISION have sufficient power to look at people who have been vaccinated AND had a prior infection?
- A: Mark Thompson (US): No, not so far

## Additional Discussion

### Criteria for digital health certificates

- US is considering and would like to hear UK and Israel experiences, inclusion criteria, how it's working, etc.
- UK
  - UK doesn't currently have a certification program in operation
    - Have it listed as a "Plan B" in the instance that domestic prevalence rises rapidly
    - Scotland implementing slightly different approach
  - Have looked at certification broadly, including a certification for international and one for domestic
  - Pros and cons weighed
    - Where should certification be implemented? Only in high-risk leisure settings?
      - Defined by large numbers, indoor-outdoor, types of activities
        - E.g., Smaller inside bars would be high risk; outdoor setting with very large numbers might also be a high risk setting at pinch points
  - Have instituted mandatory vaccinations for social care workers
  - Scotland (Jim McMenamin)
    - Today (10/1) is launch of certification process:  
<https://www.gov.scot/publications/coronavirus-covid-19-mandatory-vaccine-certification/>
      - Soft launch, relatively speaking; for many locations it will be weeks before fully implemented
  - Q: Rochelle Walensky (US): How have certification programs been socialized/ how have people received the plans?
  - A: Areas of contention that they foresaw in UK were practical issues of defining settings
    - Jenny Harries (UK): Wanted to encourage uptake of vaccination in younger people; expected short-term rise as a result of certification programs, but not a change in behavior
    - Doesn't help those who are vaccine hesitant
    - Additional questions, considerations, alternatives
      - Do staff have to be vaccinated in high-risk settings?
        - Scotland: Judicial review response to Night-time industry - see rejection of the appeal -  
<https://www.scotsman.com/news/politics/covid-scotland-nicola-sturgeon-rejects-criticism-of-covid-19-vaccine-passport-scheme-at-fmqs-3402472>
        - Alternatives to certification – Are testing alternatives to certification allowable, what would those be, how robust would they need to be?

- Collecting public opinion now to see what would be accepted by both the public and businesses
- Thomas Waite (UK):
- Concerns about what business would think of this
- Want to keep businesses open that would otherwise be closed
  - When first mentioned in England, surprising number of large venues (such as football clubs) were supportive of the principle
  - Not certain if they would be as supportive in implementation
- Nachman Ash (Israel)
  - Green Pass
    - Started very early (February 2021) during first vaccination campaign
    - Stopped Green Pass in June, but restarted use in July or August
    - Mainly for leisure places (culture events, sport events, restaurants, etc.)
      - Using Green Pass for those that are vaccinated, also allowing antigen tests to allow persons to get into an event
        - Rapid antigen tests (lateral flow) 24 hours before a show allows you a Green Pass
        - For a while were using PCR tests as well for 72 hours before events
    - Issuing to teachers: having them tested twice a week to get into school with antigen test
      - Starting next week, will also be doing that with healthcare workers and workers in places that use Green Pass (including restaurant workers)
    - Discussed in court, saying it's being done only to enforce vaccinations
      - Untrue, it is ensuring places have less risk of infection
      - Discussion on why needed for outdoors as well as indoors
  - Q: Rochelle Walensky (US): Can you only get a Green Pass with a 3<sup>rd</sup> dose?  
A: Nachman Ash (Israel)
    - Changing as of next Sunday to define "full vaccination" to require 3<sup>rd</sup> dose for Green Pass
    - Those with 2 doses with more than 6 months since second dose are losing their Green Pass (expires)
    - For those with "natural immunity," Green Pass was previously good without limit after recovery, but now you need at least one dose of vaccine after that 6 months to get a Green Pass. Any combination of recovery and vaccine gets a Green Pass for at least 6 months.
      - As of Sunday, serology will no longer be sufficient to obtain a Green Pass

***Next discussion: Friday, October 15, 2021, 7AM Eastern Standard Time***

---



**From:** Murthy, Vivek (HHS/OASH) (b) (6)  
**Sent:** Tuesday, October 12, 2021 12:28 PM  
**To:** Walensky, Rochelle (CDC/OD) (b) (6); Choucair, Bechara N. EOP/WHO (b) (6); Collins, Francis (NIH/OD) [E] <(b) (6)>  
**Cc:** Fauci, Anthony (NIH/NIAID) [E] (b) (6); Bowman, Mary (HHS/OASH/OSG) (b) (6)  
**Subject:** Tonight at 9p?

Hi Rochelle, Bechara, and Tony,  
Would you be available tonight from 9-9:30 for a call with a few other scientific colleagues on infection-induced immunity? Tony and I just discussed and were hoping to do this sooner rather than later if possible. Let me know if this might work.  
Thanks  
Vivek

---

**From:** Choucair, Bechara N. EOP/WHO (b) (6)  
**Sent:** Tuesday, October 12, 2021 12:28 PM  
**To:** Murthy, Vivek (HHS/OASH) (b) (6); Walensky, Rochelle (CDC/OD) (b) (6); Collins, Francis (NIH/OD) [E] (b) (6)  
**Cc:** Fauci, Anthony (NIH/NIAID) [E] (b) (6); Bowman, Mary (HHS/OASH/OSG) (b) (6)  
**Subject:** RE: Tonight at 9p?

Of course. Happy to.  
Bechara

Bechara Choucair, MD  
Vaccinations Coordinator  
White House COVID Response Team

(b) (6)

---

**From:** Fauci, Anthony (NIH/NIAID) [E] (b) (6)  
**Sent:** Tuesday, October 12, 2021 12:39 PM  
**To:** Choucair, Bechara N. EOP/WHO (b) (6); Murthy, Vivek (HHS/OASH) (b) (6); Walensky, Rochelle (CDC/OD) (b) (6); Collins, Francis (NIH/OD) [E] (b) (6)  
**Cc:** Bowman, Mary (HHS/OASH/OSG) (b) (6)  
**Subject:** RE: Tonight at 9p?

Okay by me.

**Anthony S. Fauci, MD**  
Director  
National Institute of Allergy and Infectious Diseases  
Building 31, Room 7A-03  
31 Center Drive, MSC 2520  
National Institutes of Health  
Bethesda, MD 20892-2520  
Phone: (b) (6)  
FAX: (301) 496-4409  
E-mail: (b) (6)

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**From:** Collins, Francis (NIH/OD) [E]  
**Sent:** Tue, 12 Oct 2021 16:39:49 +0000  
**To:** Fauci, Anthony (NIH/NIAID) [E]; Choucair, Bechara N. EOP/WHO; Murthy, Vivek (HHS/OASH); Walensky, Rochelle (CDC/OD)  
**Cc:** Bowman, Mary (HHS/OASH/OSG)  
**Subject:** RE: Tonight at 9p?

Okay by me also.  
Francis

**From:** Walensky, Rochelle (CDC/OD) <aux7@cdc.gov>  
**Sent:** Tuesday, October 12, 2021 1:06 PM  
**To:** Murthy, Vivek (HHS/OASH) <Vivek.Murthy@hhs.gov>; (b) (6)  
(b) (6); Collins, Francis (NIH/OD) [E] <collinsf@od.nih.gov>  
**Cc:** Fauci, Anthony (NIH/NIAID) [E] (b) (6); Bowman, Mary (HHS/OASH/OSG) <Mary.Bowman@hhs.gov>  
**Subject:** RE: Tonight at 9p?  
Happy to.  
Rochelle

---

**From:** [Murthy, Vivek \(HHS/OASH\)](#)  
**To:** [Walensky, Rochelle \(CDC/OD\)](#); (b) (6); [collinscapstone - Collins, Francis \(NIH/OD\) \[E\]](#)  
**Cc:** [Fauci, Anthony \(NIH/NIAID\) \[E\]](#); [Bowman, Mary \(HHS/OASH/OSG\)](#)  
**Subject:** Re: Tonight at 9p?  
**Date:** Tuesday, October 12, 2021 3:01:19 PM

---

Wonderful, thanks all. Mary will circulate a Zoom for us with a few other colleagues.

On Oct 12, 2021, at 3:02 PM, Walensky, Rochelle (CDC/OD) <[aux7@cdc.gov](mailto:aux7@cdc.gov)> wrote:

Thanks Vivek,  
Who else will be joining?  
R



**From:** Vivek.Murthy@hhs.gov  
**When:** 9:00 PM - 9:30 PM October 12, 2021  
**Subject:** Call on Infection-Induced Immunity  
**Location:** Zoom Details Below  
**Topic:** Vivek Murthy's Personal Meeting Room  
**Join ZoomGov Meeting**

(b) (6)

**Meeting ID:** (b) (6)

One tap mobile  
+16692545252,, (b) (6) (San Jose)  
+16468287666,, (b) (6) (New York)

Dial by your location  
+1 669 254 5252 US (San Jose)  
+1 646 828 7666 US (New York)  
+1 669 216 1590 US (San Jose)  
+1 551 285 1373 US

Meeting ID: (b) (6)

Find your local number: <https://hhs.gov.zoomgov.com/j/abe7jET8Li>

Join by SIP

(b) (6)

Join by H.323  
161.199.138.10 (US West)  
161.199.136.10 (US East)

Meeting ID: (b) (6)

Vivek Murthy is inviting you to a scheduled ZoomGov meeting.

**From:** Murthy, Vivek (HHS/OASH) <Vivek.Murthy@hhs.gov>  
**Sent:** Tuesday, October 12, 2021 7:38 PM  
**To:** Walensky, Rochelle (CDC/OD) <aux7@cdc.gov>  
**Subject:** Re: Tonight at 9p?

Hi Rochelle, it will be (b)(6) I think you know all of them right?

Sent from my iPhone

**From:** Walensky, Rochelle (CDC/OD)  
**Sent:** Tue, 12 Oct 2021 23:39:16 +0000  
**To:** Murthy, Vivek (HHS/OASH)  
**Subject:** RE: Tonight at 9p?

Sorry – have been in meetings all evening – I don't know (b)(6) but do know the others.  
Sounds like a good crew.  
Much appreciated,  
R

---

**From:** Iwasaki, Akiko (b)(6)  
**Sent:** Tuesday, October 12, 2021 11:48 PM  
**To:** Murthy, Vivek (HHS/OASH) (b)(6); Mascola, John (NIH/VRC) [E] (b)(6); Fauci, Anthony (NIH/NIAID) [E] (b)(6); Walensky, Rochelle (CDC/OD) (b)(6); Collins, Francis (NIH/OD) [E] (b)(6); Choucair, Bechara N. EOP/WHO (b)(6); Awwad, David (NIH/NIAID) [C] <(b)(6)>  
Offit, Paul (b)(6); (b)(6)  
**Subject:** Call on Infection-Induced Immunity

It was nice to talk to you all about infection-induced vs. vaccine-induced immunity. Please find attached the preprint study from Oxford I was referring to that compared vaccine vs. prior infection in protection against infection and disease <https://www.medrxiv.org/content/10.1101/2021.08.18.21262237v1.full-text>

Also, here is the study we published yesterday on the benefit of vaccinating the previously infected regarding enhancing neutralizing Abs against most VOCs. Clear benefit there.  
<https://www.nature.com/articles/s41586-021-04085-y>

Best wishes,  
Akiko

**From:** [Hotez, Peter Jay](#)  
**To:** [Akiko Iwasaki](#)  
**Cc:** [Murthy, Vivek \(HHS/OASH\)](#); [Mascola, John \(NIH/VRC\) \[E\]](#); [Fauci, Anthony \(NIH/NIAID\) \[E\]](#); [Walensky, Rochelle \(CDC/OD\)](#); [collinscapstone - Collins, Francis \(NIH/OD\) \[E\]](#); [\(b\) \(6\) Awwad, David \(NIH/NIAID\) \[E\]](#); [Offit, Paul](#); [mto@umn.edu](#)  
**Subject:** Re: Call on Infection-Induced Immunity  
**Date:** Wednesday, October 13, 2021 6:29:54 AM

---

Many thanks Akiko, it was good to see you and everyone last night! Best Peter

**[Peter Hotez, MD, PhD, DSc \(hon\), FASTMH, FAAP](#)**

Dean, [National School of Tropical Medicine](#)

Professor, Departments of Pediatrics, Molecular Virology & Microbiology

Health Policy Scholar

Baylor College of Medicine

Texas Children's Hospital Endowed Chair of Tropical Pediatrics

Co-Director, [Texas Children's Hospital Center for Vaccine Development](#)

University Professor, Baylor University

Faculty Fellow, Hagler Institute for Advanced Study

Senior Fellow, Scowcroft Institute of International Affairs

Texas A&M University

Baker Institute Fellow in Disease & Poverty and Adjunct Professor of Bioengineering, Rice University

Adjunct Professor, University of Texas, School of Public Health

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Amazon Author Center: <https://www.amazon.com/Peter-J-Hotez/e/B001HPIC48>

Daily Beast Contributor <https://www.thedailybeast.com/author/peter-j-hotez>

Like us on Facebook <https://www.facebook.com/BCMNationalSchoolOfTropicalMedicine/>

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Phone: [713-798-1199](tel:713-798-1199)

Fax: 713-798-2299



iPhone

On Oct 13, 2021, at 7:59 AM, Fauci, Anthony (NIH/NIAID) [E] (b) (6) wrote:

Thanks, Akiko. It was great chatting with you last night and getting your input on this important issue. I hope that all is well with you.

Best regards,

Tony

Anthony S. Fauci, MD

Director

National Institute of Allergy and Infectious Diseases

Building 31, Room 7A-03

31 Center Drive, MSC 2520

National Institutes of Health

Bethesda, MD 20892-2520

Phone: (b) (6)

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E-mail: (b) (6)

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**From:** Iwasaki, Akiko  
**Sent:** Fri, 15 Oct 2021 12:23:41 +0000  
**To:** Fauci, Anthony (NIH/NIAID) [E]  
**Subject:** Re: Call on Infection-Induced Immunity

Dear Tony,

Thank you for the opportunity to contribute my thoughts to this important group. I am honored.

Have a wonderful weekend!

best wishes, Akiko

Sent from my iPhone

---

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**From:** Salcido, Dorinda (Dori) (CDC/OD) <spe9@cdc.gov>  
**Sent:** Thursday, October 14, 2021 4:24 PM  
**To:** Walensky, Rochelle (CDC/OD) <aux7@cdc.gov>  
**Cc:** Berger, Sherri (CDC/OD/OCS) <sob8@cdc.gov>  
**Subject:** NYT

Rochelle,

(b)(5)

(b)(5)

If we

learn more, I'll circle back.

Dori

Dori Salcido  
202 897 9041 (cell)

---

**From:** Walensky, Rochelle (CDC/OD)  
**Sent:** Thu, 14 Oct 2021 20:24:39 +0000  
**To:** Salcido, Dorinda (Dori) (CDC/OD)  
**Cc:** Berger, Sherri (CDC/OD/OCS)  
**Subject:** RE: NYT

Really grateful for your running this down and staying in close touch.  
R

---

**From:** Salcido, Dorinda (Dori) (CDC/OD)  
**Sent:** Fri, 15 Oct 2021 11:42:01 +0000  
**To:** Walensky, Rochelle (CDC/OD)  
**Cc:** Berger, Sherri (CDC/OD/OCS); Tumpey, Abbigail (CDC/DDPHSS/CSELS/OD); Goldstein, Robert (CDC/OD/OADPS); McDonald, Jason (CDC/OD/OADC)  
**Subject:** Week of October 18-22 activities  
**Attachments:** Activities-COVIDvax\_PregnantPeopleREv2.docx, Week of October 18-22 2021.docx

Morning Rochelle,

We know you hear about a lot of upcoming activities throughout the week but thought it might be helpful to have some of it mapped out as we're planning for next week. In addition, Jeff asked in WH prep what else we are doing to increase vaccination coverage among pregnant people from racial and ethnic minority groups. Also attached is a summary of the work underway.

Let us know if you have any questions,

Thanks,  
Dori



# Improving COVID-19 Vaccination Coverage among Pregnant People from Racial/Ethnic Minority Groups

## Engaging Clinical Partnerships

- *Ensuring strong, consistent recommendations for pregnant people:* CDC is working closely with various clinical organizations, including the Infectious Disease Society of America, the Society for Maternal-Fetal Medicine (SMFM), and the American College of Obstetricians and Gynecologists (ACOG) to ensure all healthcare providers are recommending COVID-19 vaccination to people who are pregnant, recently pregnant, trying to get pregnant now, or might become pregnant in the future.
- *Educating and empowering women's healthcare providers:* CDC is working with ACOG to develop and disseminate information on having conversations around vaccination, making strong recommendations, and addressing patient concerns and misinformation. ACOG will be training and inspiring membership through a Champion's Network, comprised of a balanced and diverse representation of ACOG members, including members with expertise in health equity.

## Improving and Streamlining Access

- *Maximizing opportunities for vaccination:* CDC is working with the American Hospital Association to promote vaccination in OB triage and postpartum, particularly in safety net hospitals which care for a disproportionate number of patients of color.
- *Increasing vaccine providers:* CDC is working with ACOG and SMFM to increase the number of vaccine providers, particularly those who care for pregnant people at high risk for severe COVID-19. A townhall is being planned with representatives from CDC, ACOG, and the Association for Immunization Managers to educate women's healthcare providers and encourage them to enroll as vaccinators.
- *Improving Quality of Care for Pregnant and Postpartum People:* CDC is working with nine perinatal quality collaboratives (PQCs) to increase SARS-CoV-2 vaccine confidence, equitable access, and administration among populations disproportionately impacted by COVID-19. PQCs are multidisciplinary state teams that work to rapidly implement and document the uptake and impact of quality improvement (QI) strategies to improve clinical care for maternal and infant health. For this project, QI strategies include improving provider capacity to address vaccine hesitancy and vaccinate, increasing implementation of protocols to screen and vaccinate in delivery hospitals, and increasing clinical-community linkages for pregnant and postpartum people to ensure follow up.

## Understanding and Addressing Barriers

- *Understanding barriers and concerns:* CDC is planning or has conducted formative research (including focus groups, surveys, and in-depth interviews) to understand knowledge, perceptions, attitudes, and barriers among pregnant people, particularly from racial/ethnic minority groups, to inform messaging and dissemination strategies.
  - Preliminary findings from four focus groups with pregnant people from racial/ethnic minority groups noted the importance of a conversation with healthcare provider and

highlighted the following concerns about vaccination during pregnancy: safety to the baby, speed of vaccine development, and distrust of healthcare. In addition, these groups highlighted the importance of storytelling and testimonials.

- In-depth interviews and surveys with pregnant people and prenatal providers are planned as well.

### Amplifying Messaging

- *Sharing testimonials:* CDC is collecting and sharing testimonials from pregnant people of diverse backgrounds who made the decision to vaccinate. CDC is also collecting stories on the risks of COVID-19 during pregnancy and the impacts on families.
- *Disseminating PSAs:* CDC developed public service announcements on pregnancy, fertility, and vaccine safety, recorded with prominent, trusted Black and Hispanic OB-GYNs. These [videos](#) are available from the CDC website and disseminated through various channels.
- *Engaging with influencers:* CDC is exploring potential activities with influencers, potentially to include an influencer in the pregnancy space having a conversation with a prenatal care provider to address audience questions and misinformation.

### Partnering for Vaccine Equity

CDC's [Partnering for Vaccine Equity](#) program funds over 300 local or community-based organizations to promote COVID-19 and flu vaccine for adults and improve access to vaccine providers. Recent examples of efforts to engage pregnant people:

- Providing educational presentation on COVID-19 and flu for specialized audiences, including pregnant or breastfeeding women. (Institute for Family Health; New York, New York)
- Working with Navajo Nation's Unified Command and clinicians to address patient concerns and develop culturally relevant education materials, available in both Navajo and English, to be directed at pregnant women on Navajo. (Partners in Health; Boston, Massachusetts)
- Holding conversations with identified leaders or influential messengers:
  - Community conversations in Connecticut revealed that doctors are not the trusted voice to communicate about the vaccine for this population, and the most trusted voice is the family elder, which in many cases is the grandmother. Conversations were held with vaccinated grandmothers in neighborhoods who shared their experiences. Unvaccinated people were invited to attend, and these discussions were filmed to share on social and other media, as well as with other community-based organizations. (United Way Coastal Fairfield County; Bridgeport, CT)
  - In a Healthy Moms class with refugees focused on prenatal care in Georgia, conversations revealed that there is still some question of motivation or doubt behind the vaccination education in this particular ethnic community (Friends of Refugees; Clarkston, GA)
- Disseminated a video from a pregnant community leader and health care provider highlighting why she encourages her patients to get a COVID-19 vaccine. (National Alliance for Hispanic Health, La Comunidad Hispana; Washington DC & Kennet Square, PA)



## Week of October 18-22

### **Tuesday 10/19**

Science Brief - Community Use of Masks to Control the Spread of SARS-CoV-2 – Date TBD

Data were added from studies published since the last update that further demonstrate that mask wearing reduces new infections, including infections related to SARS-CoV-2 variants of concern. A section was also added on the health effects of mask wearing among children (the studies show no adverse effects).

*MMWR* - COVID-19 vaccine effectiveness in preventing pediatric hospitalization – Overcoming Network, June-September 2021

### **Wednesday 10/20**

Press Release: CDC Advisory Committee to the Director

### **Thursday 10/21**

ACIP announcement

The Department of Education (ED) in Atlanta on the afternoon of Thursday October 21, 2021 and Friday October 22, 2021 for a Community Engagement Tour. CDC staff joining Townhall; media possible.

JAMA – Racial and ethnic disparities in rates of COVID-19-associated hospitalization, intensive care unit admission and in-hospital death, COVID-NET, March 2020-February 2021. Authors: Anna Acosta and Shikha Garg

**Friday 10/22 – TBD – schedule subject to change on 10/22 and 10/29**

(b)(5)

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**From:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>

**Sent:** Saturday, October 16, 2021 11:28:14 AM

**To:** Briggs-Hagen, Melissa (CDC/DDID/NCIRD/DVD) <[vka5@cdc.gov](mailto:vka5@cdc.gov)>; Hall, Aron (CDC/DDID/NCIRD/DVD) <[esg3@cdc.gov](mailto:esg3@cdc.gov)>; Clark, Thomas A. (CDC/DDID/NCIRD/DVD) <[tnc4@cdc.gov](mailto:tnc4@cdc.gov)>; Bialek, Stephanie R. (CDC/DDID/NCIRD/DVD) <[zqg7@cdc.gov](mailto:zqg7@cdc.gov)>; MacNeil, Adam (CDC/DDID/NCIRD/DVD) <[aho3@cdc.gov](mailto:aho3@cdc.gov)>

**Cc:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>; Braden, Chris (CDC/DDID/NCEZID/OD) <[crb5@cdc.gov](mailto:crb5@cdc.gov)>

**Subject:** Infection- vs. Vaccine Induced Immunity Science Brief

Hey friends,

(b)(5)

Thanks!

-john

John T. Brooks, MD  
Senior Science Advisor  
CDC Emergency COVID-19 Response  
404-428-3013 and [zud4@cdc.gov](mailto:zud4@cdc.gov)

---

**From:** Briggs-Hagen, Melissa (CDC/DDID/NCIRD/DVD) <[vka5@cdc.gov](mailto:vka5@cdc.gov)>

**Sent:** Saturday, October 16, 2021 1:04 PM

**To:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>; Hall, Aron (CDC/DDID/NCIRD/DVD) <[esg3@cdc.gov](mailto:esg3@cdc.gov)>; Clark, Thomas A. (CDC/DDID/NCIRD/DVD) <[tnc4@cdc.gov](mailto:tnc4@cdc.gov)>; Bialek, Stephanie R. (CDC/DDID/NCIRD/DVD) <[zqg7@cdc.gov](mailto:zqg7@cdc.gov)>; MacNeil, Adam (CDC/DDID/NCIRD/DVD) <[aho3@cdc.gov](mailto:aho3@cdc.gov)>

**Cc:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>; Braden, Chris (CDC/DDID/NCEZID/OD) <[crb5@cdc.gov](mailto:crb5@cdc.gov)>

**Subject:** Re: Infection- vs. Vaccine Induced Immunity Science Brief

Hi John,

(b)(5)

(b)(5)

Best,

Melissa

Get [Outlook for iOS](#)

**From:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>

**Sent:** Tuesday, October 19, 2021 12:53 PM

**To:** Briggs-Hagen, Melissa (CDC/DDID/NCIRD/DVD) <[vka5@cdc.gov](mailto:vka5@cdc.gov)>; Brooks, John T. (CDC/DDID/NCHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>; Hall, Aron (CDC/DDID/NCIRD/DVD) <[esg3@cdc.gov](mailto:esg3@cdc.gov)>; Clark, Thomas A. (CDC/DDID/NCIRD/DVD) <[tnc4@cdc.gov](mailto:tnc4@cdc.gov)>; Bialek, Stephanie R. (CDC/DDID/NCIRD/DVD) <[zqg7@cdc.gov](mailto:zqg7@cdc.gov)>; MacNeil, Adam (CDC/DDID/NCIRD/DVD) <[aho3@cdc.gov](mailto:aho3@cdc.gov)>  
**Cc:** Braden, Chris (CDC/DDID/NCEZID/OD) <[crb5@cdc.gov](mailto:crb5@cdc.gov)>

**Subject:** RE: Infection- vs. Vaccine Induced Immunity Science Brief

Hi Melissa,

(b)(5)

(b)(5)

?

Thank you,

Barbara

**From:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>

**Sent:** Tuesday, October 19, 2021 3:16 PM

**To:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>; Braden, Chris (CDC/DDID/NCEZID/OD) <[crb5@cdc.gov](mailto:crb5@cdc.gov)>

**Cc:** Briggs-Hagen, Melissa (CDC/DDID/NCIRD/DVD) <[vka5@cdc.gov](mailto:vka5@cdc.gov)>

**Subject:** RE: Infection- vs. Vaccine Induced Immunity Science Brief

(b)(5)

(b)(5)



(b)(5)

Cheers,

-john

John T. Brooks, MD  
Senior Science Advisor  
CDC Emergency COVID-19 Response  
404-428-3013 and [zud4@cdc.gov](mailto:zud4@cdc.gov)

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**From:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>  
**Sent:** Tuesday, October 19, 2021 3:36 PM  
**To:** Walensky, Rochelle (CDC/OD) <[aux7@cdc.gov](mailto:aux7@cdc.gov)>  
**Cc:** Goldstein, Robert (CDC/OD/OADPS) <[gyd2@cdc.gov](mailto:gyd2@cdc.gov)>; Tumpey, Abbigail (CDC/DDPHSS/CSELS/OD) <[aws8@cdc.gov](mailto:aws8@cdc.gov)>; Salcido, Dorinda (Dori) (CDC/OD) <[spe9@cdc.gov](mailto:spe9@cdc.gov)>  
**Subject:** FW: Infection- vs. Vaccine Induced Immunity Science Brief

The paper from the UK.

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**From:** Walensky, Rochelle (CDC/OD) <[aux7@cdc.gov](mailto:aux7@cdc.gov)>  
**Sent:** Tuesday, October 19, 2021 5:25 PM  
**To:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>  
**Cc:** Goldstein, Robert (CDC/OD/OADPS) <[gyd2@cdc.gov](mailto:gyd2@cdc.gov)>; Tumpey, Abbigail (CDC/DDPHSS/CSELS/OD)

<[aws8@cdc.gov](mailto:aws8@cdc.gov)>; Salcido, Dorinda (Dori) (CDC/OD) <[spe9@cdc.gov](mailto:spe9@cdc.gov)>; Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>

**Subject:** RE: Infection- vs. Vaccine Induced Immunity Science Brief

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**From:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>

**Sent:** Tuesday, October 19, 2021 5:54 PM

**To:** Walensky, Rochelle (CDC/OD) <[aux7@cdc.gov](mailto:aux7@cdc.gov)>; Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>

**Cc:** Goldstein, Robert (CDC/OD/OADPS) <[gyd2@cdc.gov](mailto:gyd2@cdc.gov)>; Tumpey, Abbigail (CDC/DDPHSS/CSELS/OD) <[aws8@cdc.gov](mailto:aws8@cdc.gov)>; Salcido, Dorinda (Dori) (CDC/OD) <[spe9@cdc.gov](mailto:spe9@cdc.gov)>

**Subject:** RE: Infection- vs. Vaccine Induced Immunity Science Brief



(b)(5)

-john

John T. Brooks, MD  
Senior Science Advisor  
CDC Emergency COVID-19 Response  
404-428-3013 and [zud4@cdc.gov](mailto:zud4@cdc.gov)



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**From:** Walensky, Rochelle (CDC/OD) <[aux7@cdc.gov](mailto:aux7@cdc.gov)>

**Sent:** Tuesday, October 19, 2021 5:58 PM

**To:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>; Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>

**Cc:** Goldstein, Robert (CDC/OD/OADPS) <[qyd2@cdc.gov](mailto:qyd2@cdc.gov)>; Tumpey, Abbigail (CDC/DDPHSS/CSELS/OD) <[aws8@cdc.gov](mailto:aws8@cdc.gov)>; Salcido, Dorinda (Dori) (CDC/OD) <[spe9@cdc.gov](mailto:spe9@cdc.gov)>

**Subject:** RE: Infection- vs. Vaccine Induced Immunity Science Brief

Great, thanks much, John

(b)(5)

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**From:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <[zud4@cdc.gov](mailto:zud4@cdc.gov)>

**Sent:** Tuesday, October 19, 2021 6:27 PM

**To:** Walensky, Rochelle (CDC/OD) <[aux7@cdc.gov](mailto:aux7@cdc.gov)>; Mahon, Barbara (CDC/DDID/NCIRD/OD) <[bdm3@cdc.gov](mailto:bdm3@cdc.gov)>

**Cc:** Goldstein, Robert (CDC/OD/OADPS) <[qyd2@cdc.gov](mailto:qyd2@cdc.gov)>; Tumpey, Abbigail (CDC/DDPHSS/CSELS/OD) <[aws8@cdc.gov](mailto:aws8@cdc.gov)>; Salcido, Dorinda (Dori) (CDC/OD) <[spe9@cdc.gov](mailto:spe9@cdc.gov)>

**Subject:** RE: Infection- vs. Vaccine Induced Immunity Science Brief

(b)(5)





(b)(5)

-john

John T. Brooks, MD  
Senior Science Advisor  
CDC Emergency COVID-19 Response  
404-428-3013 and [zud4@cdc.gov](mailto:zud4@cdc.gov)

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**From:** Mahon, Barbara (CDC/DDID/NCIRD/OD) <bdm3@cdc.gov>  
**Sent:** Tuesday, October 19, 2021 6:41 PM  
**To:** Brooks, John T. (CDC/DDID/NCHHSTP/DHP) <zud4@cdc.gov>; Walensky, Rochelle (CDC/OD) <aux7@cdc.gov>  
**Cc:** Goldstein, Robert (CDC/OD/OADPS) <qyd2@cdc.gov>; Tumpey, Abbigail (CDC/DDPHSS/CSELS/OD) <aws8@cdc.gov>; Salcido, Dorinda (Dori) (CDC/OD) <spe9@cdc.gov>  
**Subject:** RE: Infection- vs. Vaccine Induced Immunity Science Brief

(b)(5)

**From:** Mahon, Barbara (CDC/DDID/NCIRD/OD)  
**Sent:** Tue, 19 Oct 2021 19:34:56 +0000  
**To:** Walensky, Rochelle (CDC/OD)  
**Cc:** Goldstein, Robert (CDC/OD/OADPS); Tumpey, Abbigail (CDC/DDPHSS/CSELS/OD); Salcido, Dorinda (Dori) (CDC/OD)  
**Subject:** science brief  
**Attachments:** Infection and Vaccine Induced Immunity\_Science Brief\_uncleared\_101921.docx

Rochelle,

The current unclassified draft of the Science Brief on infection-induced and vaccine-induced protection from reinfection is attached

(b)(5)

(b)(5)

(b)(5)

Thanks,

Barbara

*Barbara Mahon, MD, MPH  
Incident Manager  
CDC COVID-19 response  
+1-470-755-9262*

**From:** Walensky, Rochelle (CDC/OD)  
**Sent:** Tue, 19 Oct 2021 22:42:37 +0000  
**To:** Mahon, Barbara (CDC/DDID/NCIRD/OD); Brooks, John T. (CDC/DDID/NCHHSTP/DHP)  
**Cc:** Goldstein, Robert (CDC/OD/OADPS); Tumpey, Abbigail (CDC/DDPHSS/CSELS/OD); Salcido, Dorinda (Dori) (CDC/OD)  
**Subject:** RE: Infection- vs. Vaccine Induced Immunity Science Brief

(b)(5)

**From:** Walensky, Rochelle (CDC/OD)  
**Sent:** Tue, 19 Oct 2021 22:43:00 +0000  
**To:** Mahon, Barbara (CDC/DDID/NCIRD/OD); Brooks, John T. (CDC/DDID/NCHHSTP/DHP)  
**Cc:** Goldstein, Robert (CDC/OD/OADPS); Tumpey, Abbigail (CDC/DDPHSS/CSELS/OD); Salcido, Dorinda (Dori) (CDC/OD)  
**Subject:** RE: Infection- vs. Vaccine Induced Immunity Science Brief

And thank you all,

(b)(5)

(b)(5)



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**From:** Berger, Sherri (CDC/OD/OCS) <sob8@cdc.gov>  
**Sent:** Monday, October 18, 2021 1:51 PM  
**To:** Walensky, Rochelle (CDC/OD) <aux7@cdc.gov>  
**Subject:** call when free

Sherri A. Berger, MSPH  
Centers for Disease Control and Prevention  
[SBerger@cdc.gov](mailto:SBerger@cdc.gov)  
404.213.8392 cell  
404.639.7846 desk

**From:** Walensky, Rochelle (CDC/OD)  
**Sent:** Mon, 18 Oct 2021 17:51:21 +0000  
**To:** Berger, Sherri (CDC/OD/OCS)  
**Subject:** RE: call when free

Hearing about infection induced immunity 😊

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# October 11, 2021

Monday

October 2021

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November 2021

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MONDAY		Notes
	11	
Federal Holiday - Columbus Day Observed		
7 <sup>AM</sup>		
8		
9		
10		
11	<b>HGPS Lab Meeting</b> Building 50, Room 5328	
12 <sup>PM</sup>		
1		
2		
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# October 12, 2021

Tuesday

October 2021

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November 2021

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TUESDAY		Notes
	12	
7 <sup>AM</sup>		
8	<b>ACTIV "War Room" Call;</b> (b) (6) Melencio	
9	<b>Executive Committee Meeting</b> (b) (6) Wood, Gretchen (NIH/OD) [E]	
10	<b>Meeting with Secretary Becerra and Dr. I</b> Zoom; Collins, Francis (NIH/OD) [E] <b>NIH CHECK-IN</b> OS Scheduling (HHS/OS)	
11		
12 <sup>PM</sup>		
1		
2		
3		
4		
5	<b>Meeting with Dr. Lawrence Tabak and</b> <b>Meeting with Drs. Francis Collins and Lav</b>	
6		
	9:00pm - 9:30pm Call on Infection-Induced Immunity (Zoom Details Below )	

# October 13, 2021

Wednesday

October 2021

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November 2021

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WEDNESDAY		Notes
	13	
7 <sup>AM</sup>	<b>Private Appointment</b>	
8		
9		
10		
11		
12 <sup>PM</sup>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>*Milken Institute Global Conference - CO</b> Zoom Collins, Francis (NIH/OD) [E]</p> </div> <div style="width: 45%;"> <p><b>Global Conference 2021   COVID-19 Upd.</b> ZOOM MI Speakers</p> </div> </div>	
1		
2	<p><b>Keynote (pre-recorded) - NORD Rare Diseases and Orphan Products Breakthrough!</b></p> <p><b>*Interview with USA Today;</b> Via Zoom link in the calendar entry; Collins, Francis (NIH/OE</p>	
3	<p><b>*Meeting with Rep. Mike Burgess;</b> Via Zo</p> <p><b>*Call with Senator Jerry Moran;</b> He will d</p>	
4		
5	<p><b>* Weekly COVID-19 Clinicians Check-In</b> Zoom; Murthy, Vivek (HHS/OASH)</p>	
6		
	(b) (6)	

# October 14, 2021

Thursday

October 2021

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November 2021

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THURSDAY		Notes
	14	
7 <sup>AM</sup>		
8		
9	Remarks - AfCDC Grand Rounds; Zoom; Collins, Francis (NIH/OD) [E]	
10	*Introductory meeting with Scott Galasir   Introductory meeting with Scott Galasir	
11	*Multi-agency Collaboration on the BRAIN   Multi-agency Collaboration on the BRAIN	
12 <sup>PM</sup>	*HEAL Meeting Zoom Collins, Francis (NIH/OD) [E]	*Call with Rep. Quigley; Zoom link in c
1	*LAB MEETING   Idowu Aimola's Transition Meeting; Zoom; McManus, Ayanna (NIH)	
2	*NIH IRP Animal Program Gratitude Tour Zoom; Collins, Francis (NIH/OD) [E]	Dr. Collins' Appreciation Event for the NI <a href="https://nih.zoomgov.com/j/...">https://nih.zoomgov.com/j/...</a> (b) (6)
3		
4	*Meeting on SRP-2001 data needs for pr Via Zoom link in the calendar entry Collins, Francis (NIH/OD) [E]	*BBC World News America Interview Via Skype (4:50 PM connect, 5:00 PM hit tin
5	*Call with Senator Van Hollen; You will dial him (b) (6); Collins, F	
6		



# October 15, 2021

Friday

October 2021

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November 2021

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FRIDAY		Notes
	15	
	*Call with Dr. Christine Goertz (You will dial her on (b) (6))	
7 <sup>AM</sup>		
8	ACTIV "War Room" Calls; Dial-in: (b) (6) Passcode: (b) (6) Melencio,	
9	Remarks - CCRHB Meeting **Remarks from 9:10 to 9:30 AM** Zoom Collins, Francis (NIH/OD) [E]	
10		*Remarks (pre-recorded) - CEAL Allia
11		
12 <sup>PM</sup>		
1		*Interview with Yahoo Finance Via Skype (12:55 PM connect, 1:05 PM hit t Collins, Francis (NIH/OD) [E]
		*Remarks (pre-recorded) - 2021 NIH Virtual Seminar on Program Funding and Gr
2		Remarks (pre-recorded) - Gratitude Message to the NIAID Scientific Review Progi
3	DO NOT SCHEDULE *Call with Senator Tom Harkin; The Sena	*MSNBC Dayside with Hallie Jackson Int Via Mobile Studio (3:20 PM seated, 3:30 PM
4		*FNIH Awards Ceremony Interview with Dr. Xiaowei Zhuang; Zoom; Collins, Francis
5	*Bi-weekly Meeting with Drs. Lawrence Tabak and Tara Schwetz Re: ARPA-H;	
	Administrative Discussion Zoom; McManus, Ayanna (NIH/OD) [E]	
6		







# October 14, 2021

Thursday

October 2021

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November 2021

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THURSDAY		Daily Task List
	14	Arrange by: Due Date
	Speeches Meeting - Collins, Francis (NIH/OD) [E]	
7 <sup>AM</sup>		
8	IC Directors' Meeting Building 1, Room 151	
9		
10		
11		
12 <sup>PM</sup>		
1		
2	Canceled: Precision Health research mtg <a href="https://nih.zoomgov.com/j/...">https://nih.zoomgov.com/j/...</a> Biesecker, Leslie (NIH/NHGRI) [E]	
3		
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	9:30pm - 10:00pm IMOD TESTING RITA DISREGARD	

# October 15, 2021




Friday

October 2021

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November 2021

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21	22	23	24	25	26	27
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FRIDAY		Daily Task List
15		Arrange by: Due Date
*Friday Floor Forum 		
LAB MEETING   Single Cell Joint Meeting  		
7 <sup>AM</sup>		
8		
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12 <sup>PM</sup>		
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6		
		Notes

# October 11, 2021 - October 15, 2021

October 2021							November 2021						
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17	18	19	20	21	22	23	21	22	23	24	25	26	27
24	25	26	27	28	29	30	28	29	30				
31													

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
	11	12	13	14	15
	← From Sep 16		(b)(6)	Waldo, Eric (HHS/OASH)	
	[Adam OOO] - Beckman, Adam (HHS/OASH)				
	Columbus Day	Ann Kim OOO	FYI: Nancy OOO until 1p.m. ET	EEOB Info // Wifi Info - Murthy, FYI - HHS Tobacco Control FYI: FDA Advisory Committee:	FYI: FDA Advisory Committee: J&J + Mix/Match Boosts - FYI: NAM CWB Monthly Meeting
7 AM		VM	VM	CBS This Morning ; Mobile Van ; VM	VM
8				[Travel] WALK or Uber/Lyft to V	
9		VM REMINDER: Send Info [SOLO] Prep Time for Clinicians	[Travel] VM Drive to HHS	9:00am VC: P Room/Wifi COVID Testing [Must Be Tested]	OSG Daily Sync ; Murthy, Vivek
10		OSG Daily Sync ; Murthy, Vivek Snapchat Prep Call with Staff ; I	OSG Daily Sync ; Murthy, Vivek		Call with Jerry Hauser ; VM will C
11		Meeting for Dr. Murthy, Dr. Wo Vivek & Melea Check in ; Co	FYI: Mental Health Listening Session [High School] Murthy, Vivek (HHS/OASH)	Briefing: COVID Oval Office or :	VM Vertical Team Check-In [Cor Alex Zoom ; Murthy, Vivek (HHS/C
12 PM		PREP/WORK Time Pandemic Endgame Speech [Dis Alex Zoom Murthy, Vivek (HHS/OASH)	Scruggs <> VM; Zoom Below if	HOLD: Recordings Murthy, Vivek	[Travel] HHS I Driver Details E OSG Staff Mei Murthy, Vivek
1		Project HEAL Mur	CCHQ Check-In; Jessica Scrut	[Travel] HHS Motor Pool to HH	Beyond Differences - School Visit Murthy, Vivek (HHS/OASH)
2		HOLD Check I Jessica S	Review Selena Gomez Op-Ed [w	Meeting with DSG Hinton & VA Hybrid Meeting: HHS Room 701 /	
3		Boosters Discussion; https://hhs	REMINI VM - D [WHILE	REMINDER FI IF ABLE - Givi	[WHILE II [Travel] HHS Motor Pool
4		Snapchat CEO Conversation & F	PREP/OPEN	Weekly Strategic Check Murthy, Vivek (HHS/OASH) COVID Pre VC: Principals https://pitc.zoc Zients, Jeff	Meeting with Secretary Mark Gl [Weekly] Dr. Levine & Dr. M
5			[Weekly] COVID-19 Clinicians Cl Zoom Details Below ; Murthy,	Vivek & Melea Check in ; Co	SG & Scruggs Weekly Sync;
6		VM	VM	[Travel] Uber/Lyft To Dinner	VM
7				Dinner at Ambassador Taranjit Singh Sandhu's Residence (b)(6)	
8					
9		Call on Infection-Induced Immu	[Pre-Tape] Don Lemon, CNN; M		