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UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF CALIFORNIA (FRESNO DIVISION)

JANINE CHANDLER, et al.,

Plaintiffs,

v.

CALIFORNIA DEP'T OF CORRECTIONS AND REHABILITATION, et al.,

Defendants.

Case No. 1:21-cv-01657-JLT-HBK

DECLARATION OF COLIN WRIGHT IN SUPPORT OF PLAINTIFFS' OPPOSITION TO MOTION TO DISMISS

I, Colin Wright, hereby declare:

1. I make this declaration based on my own personal knowledge. I am over the age of 18 and competent to testify. If called to testify, I could and would do so as follows:

2. I hold a Ph.D. in evolutionary biology earned in 2018 from the University of California Santa Barbara. A true and correct copy of my current curriculum vitae is attached hereto as Exhibit A. I make this declaration in support of the Plaintiffs in the instant lawsuit, based upon my professional, academic, and scientific knowledge and expertise.

3. As with other animals (and as to all mammals), words that describe the female and male sex classes of the human species are needed because of the roles these types of individuals play in reproduction. The human species, *Homo sapiens*, like other mammals, are dioecious, meaning that our species is comprised of two distinct reproductive types—males and females, which are each defined by the type of gamete (i.e. sperm vs. egg) their primary reproductive anatomy is organized around, through development, to produce. Evolution has not resulted in any other method of reproduction in the human species. Thus, only the two sexes (male and female) exist.

4. "Intersex" is an umbrella term referring to individuals with developmental conditions that have resulted in ambiguous genitalia. Intersex conditions are extremely rare (< 0.02% of all births), and their existence does not call into question the reality of males and females existing as discrete natural categories. Intersex individuals should not be confused or conflated with transgender individuals.

5. The only factual, objective meaning of the words "woman" and "man" are as references to adult human females, and adult human males, respectively. An adult is a member of its species that has reached the average age of reproduction for their species. A human is a member of the species *Homo sapiens*. A female is a human whose reproductive anatomy is organized from the start of human embryonic development around the production of large, sessile gametes. A male is a human whose reproductive anatomy is organized from the start of human embryonic development around the production of small, motile gametes. A "women's prison," therefore, objectively refers to a facility housing incarcerated adult human females.

6. From a factual, scientific standpoint, whether a person is a man or a woman refers to membership in one of the two sex classes as defined above. Sex class membership is genetically determined for each human during development in utero. Being male or female is

an immutable characteristic of each human, fixed well before a human has been born, and unchangeable for the entirety of an individual's life span because being male or female was determined by fetal developmental pathways that can never be reversed.

7. Sexual dimorphism results from intrasexual selection within a species, such as competition among males for reproductive status. These selection pressures result in predictable and significant physical, physiological, and behavioral differences between males and females. The condition of being a human male, or a human female, originating from the fertilization a female's large gamete (referred to as an egg) by a male's small gamete (referred to as spermatoza), is genetically determined, and hormones cause the human embryo to develop reproductive organs and physical structures.

8. Sex organs in male humans consist of primary sex characteristics: external and internal genitalia (e.g. penis, testes, and supporting structures), directly involved in reproduction (delivering sperm). Sex organs in female humans consist of primary sex characteristics that include a vagina, uterus, fallopian tubes, and cervix, developed for the function of producing eggs and bearing children.

9. Secondary sex characteristics refer to sex-specific traits that develop during puberty. For males, these include the growth of facial and body hair, pelvic build, increased upper-body muscularity, a deepened voice, and other characteristics. Female secondary sex characteristics include the development of breasts, widened hips, and other characteristsics.

10. "Intersex" (more accurately referred to as disorders of sexual development or "DSDs") describes a range of conditions caused by numerous genetic and/or developmental abnormalities. No persons with a DSD are a "third sex" (i.e., a sex other than male or female) as no such disorder of sexual development has ever resulted in the appearance of a distinct third type of gonad producing a distinct third type of gamete. Further, since being male or

female does not depend on actually producing sperm or eggs, but rather on whether an individual human's reproductive system is organized around the production of sperm, or eggs, the fact that some DSDs render a male individual unable to produce sperm, or a female individual unable to produce eggs, does not mean the person is neither male nor female. Pre-pubertal males do not produce sperm, yet they are still males, and post-menopausal women no longer produce eggs, yet they are still females.

11. "Gender" is a word used in social discourse that does not have a fixed, objective meaning relating to human reproductive sex or membership of individual humans in the male or female sex class. My understanding from political and social discourse is that "gender identity" refers to an individual person's deeply felt sense of being male, female, both, or neither. From an objective standpoint, a person's subjective feelings do not define or change their sex, which is factually and statically either male or female, determined before birth, and defined by objective reproductive anatomy.

12. Moreover, no social or medical actions a person might take because of his or her "gender identity" result in a change of the person's immutable, factual sex as a male or female person. For example, adopting the dress or mannerisms that are commonly associated with girls or women does not determine whether a person is factually a girl or woman.

13. Similarly, medical interventions such as the administering of exogenous hormones, like estrogen (normally produced naturally by female bodies in much greater quantity than produced naturally by male bodies), and/or medication that suppresses a male body's production of testosterone (a hormone normally produced naturally by male bodies in much greater quantities than produced naturally by female bodies) does not result in a male person becoming a female person, despite development of some secondary sex characteristics associated with females (such as breast development). Surgeries performed on a male

person's genitals, such as penectomy, orchiectomy, and vaginoplasty, do not result in the male person becoming a female person, despite changing the appearance and functionality of the male person's genitalia. Such interventions are purely cosmetic.

14. Due to the fixed and immutable nature of being either male or female, a characteristic determined outside the individual person's choice or control, there are physical and physiological characteristics that differ between men and women regardless of any individual's "gender identity" or any social or medical actions taken to superficially appear more or less male or female, or more or less masculine or feminine.

15. Generally speaking, the set of physical and physiological differences between men and women result in men being physically larger, taller, and possessing greater physical strength (particularly upper body strength), facts relevant to women's vulnerability to physical or sexual violence perpetrated by men. Put simply, assuming an equal level of psychological or emotional aggressiveness in a man and a woman, and even assuming equal height and weight, the man will be capable of producing greater physical force than the woman.

16. Studies have demonstrated that even with exogenous hormone therapy designed to reduce male characteristics and increase female characteristics, males retain significantly greater physical strength compared to females – even females who are taking exogenous hormone therapy to develop male-like secondary sex characteristics.

17. The foregoing biological, scientific facts concerning the reality of human sexual dimorphism and resulting physical and sexual differences between men and women, support laws and policies that provide separate accommodations or services to women, and to men, in many areas of life. When the government incarcerates people convicted of criminal offenses, as punishment, as protection of society at large, and/or for the purpose of rehabilitating the offenders, the State imposes physical confinement and tight control over the autonomy of

offenders in where they live, sleep, bathe, dress, what they eat and what activities they engage in. In such an environment, where inmates have little to no say about who they reside with and socialize with, in relatively small physical spaces, the physical and physiological differences between men and women justify incarcerating women separately from men, if preventing male physical and sexual violence against women is a goal.

18. Assuming hypothetically that the criminal offense backgrounds, prison disciplinary behavior history, and mental health status of all inmates were exactly the same, it is an unavoidable biological reality that in the event of any interpersonal conflict, men are capable of physically overpowering and inflicting greater harm upon women than women upon men.

19. Further, it is an inescapable biological reality that only the female members of the human species are capable of becoming pregnant and bearing children. Thus, vaginal penetrative sex between a man with a functioning penis and testes, and a woman with a functioning uterus, might result in pregnancy, a condition (replete with lifelong health and psychological consequences) that only women will experience.

20. If a legitimate goal or obligation of the government is to prevent women from being physically or sexually abused in prison and to prevent pregnancies in prison, separation of inmates based on sex is the objective, rational way to achieve such goals or fulfill such obligations.

I DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES THAT THE FOREGOING IS TRUE AND CORRECT.

SIGNED IN NASHVILLE, TENNESSEE ON MAY 27, 2022.

Colin Wright

Exhibit A

Dr. Colin M. Wright, PhD

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Work

Current:

Reality's Last Stand (May 2022 – Present)
- Founding Editor

Quillette Magazine (February 2022 – Present)
- Contributing Editor

Previous:

Foundation Against Intolerance & Racism (FAIR) (August 2021 – May 2022)
- Senior Editor

Quillette Magazine (May 2020 – February 2022)
- Managing Editor

The Pennsylvania State University (July 1, 2018 – April 2020) – State College, PA
- Eberly Research Postdoctoral Fellow

Education

UC Santa Barbara (June 15, 2018) – Santa Barbara, CA
- Ph.D. in Evolution, Ecology and Marine Biology

UC Davis (June 14, 2012) – Davis, CA
- B.S. in Evolution, Ecology and Biodiversity

Academic Publications

2021

1. Cassidy, S.T., Chapa, J., Tran, T., Dolezal, N., Gerena, C., Johnson, G., Leyva, A., Stein, S., **Wright, C.M.**, and Keiser, C.N. Disease defences across levels of biological organization: individual and social immunity in acorn ants. *Animal Behaviour* 179 (2021): 73-81.
2. Hilton, E., Thompson, P., **Wright, C.M.**, and Curtis, D. The reality of sex. *Irish Journal of Medical Science (1971-)* (2021): 1-1

2020

3. **Wright, C.M.**, Lichtenstein, J.L.L., Luscuskie, L.P., Montgomery, G.A., Geary, S., Pruitt, J.N., Pinter-Wollman, N., and Keiser, C.N.. Spatial proximity and prey vibratory cues influence

collective hunting in social spiders. *Israel Journal of Ecology and Evolution* 66, no. 1-2 (2020): 26-31

4. McEwen, B.L., Lichtenstein, J.L.L., Fisher, D.N., **Wright, C.M**., Chism, G.T., Pinter-Wollman, N., Pruitt, J.N. Predictors of colony extinction vary by habitat type in social spiders. *Behavioral Ecology Sociobiology* 74(2)

2019

5. **Wright, C.M.**, Lichtenstein, J.L.L., Luscuskie, L.P., Montgomery, G.A., Geary, S., Pruitt, J.N., Pinter-Wollman, N., and Keiser, C.N. Spatial proximity and prey vibratory cues influence collective hunting in social spiders. *Israel Journal of Ecology & Evolution* 66(1-2), p.26-31
6. Lichtenstein, J.L.L., **Wright, C.M.**, and Pruitt, J.N. Repeatability of between-group differences in collective foraging is shaped by group composition in social spiders. *Journal of Arachnology* 47(2), p.276-279
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8. **Wright, C.M.**, Lichtenstein, J.L.L., Tibbetts E.A., and Pruitt, J.N. Individual variation in queen morphology and behavior predict colony success in the wild. *Behavioral Ecology and Sociobiology* 73(122)
9. **Wright, C.M.**, Fisher, D.N., Nerone, W.V., Lichtenstein, J.L.L., Tibbetts, E.A., and Pruitt, J.N. 2019. Foundress number, but not queen size or boldness, predicts colony life-history in wild paper wasps. *Biological Journal of the Linnean Society* 128(1), p.20-29
10. **Wright, C.M.**, Lichtenstein, J.L.L., Montgomery, G.A., Luscuskie, L.P., Pinter-Wollman, N., and Pruitt, J.N. 2019. Better safe than sorry: spider societies mitigate risk by prioritizing caution. *Behavioral Ecology* 30(5), p.1234-1241
    - Featured on the cover of the Sept./Oct. issue of *Behavioral Ecology*
11. **Wright C.M.**, Lichtenstein, J.L.L., Doering, G.N., Pretorius, J., Muenier, J. and Pruitt, J.N. 2019 Collective personalities: present knowledge and new frontiers. *Behavioral Ecology and Sociobiology 73*(3), p.31.
12. Lichtenstein, J.L.L., Daniel, K.A., Wong, J.B., **Wright, C.M.**, Doering, G.N., Costa-Pereira, R. and Pruitt, J.N., 2019. Habitat structure changes the relationships between predator behavior, prey behavior, and prey survival rates. *Oecologia*, pp.1-12.

2018

13. Kamath, A., Primavera, S.D., **Wright, C.M.**, Doering, G.N., Sheehy, K.A., Pinter-Wollman, N. and Pruitt, J.N., 2018. Collective behavior and colony persistence of social spiders depends on their physical environment. *Behavioral Ecology 30*(1), pp.39-47.
14. Keiser, C.N., Lichtenstein, J.L.L., **Wright, C.M.**, Chism, G.T. and Pruitt, J.N., 2018. Personality and behavioral syndromes in insects and spiders. *Insect Behavior: From Mechanisms to Ecological and Evolutionary Consequences*, p.236.
15. Miller, S.E., Bluher, S.E., Bell, E., Cini, A., Silva, R.C.D., de Souza, A.R., Gandia, K.M., Jandt, J., Loope, K., Prato, A. and Pruitt, J.N…, 2018. WASP nest: a worldwide assessment of social Polistine nesting behavior. *Ecology*, *99*(10), pp.2405-2405.
16. Doering, G.N., Kamath, A., **Wright, C.M.** and Pruitt, J.N., 2018. Evidence for contrasting size-frequency distributions of workers patrolling vegetation vs. the ground in the polymorphic African ant *Anoplolepis custodiens*. *Insectes Sociaux*, *65*(4), pp.663-668.

2017

17. Lichtenstein, J.L., **Wright, C.M.**, McEwen, B., Pinter-Wollman, N. and Pruitt, J.N., 2017. The multidimensional behavioural hypervolumes of two interacting species predict their space use and survival. *Animal Behaviour*, *132*, pp.129-136.
18. **Wright, C.M.**, Lichtenstein, J.L.L., Montgomery, G.A., Luscuskie, L.P., Pinter-Wollman, N. and Pruitt, J.N., 2017. Exposure to predators reduces collective foraging aggressiveness and eliminates its relationship with colony personality composition. *Behavioral Ecology and Sociobiology*, *71*(8), p.126.
19. **Wright, C.M.**, Hyland, T.D., Izzo, A.S., McDermott, D.R., Tibbetts, E.A. and Pruitt, J.N., 2017. Polistes metricus queens exhibit personality variation and behavioral syndromes. *Current Zoology*, *64*(1), pp.45-52.
20. **Wright, C.M.**, Skinker, V.E., Izzo, A.S., Tibbetts, E.A. and Pruitt, J.N., 2017. Queen personality type predicts nest-guarding behaviour, colony size and the subsequent collective aggressiveness of the colony. *Animal Behaviour*, *124*, pp.7-13.
21. Lichtenstein, J.L., **Wright, C.M.**, Luscuskie, L.P., Montgomery, G.A., Pinter-Wollman, N. and Pruitt, J.N., 2017. Participation in cooperative prey capture and the benefits gained from it are associated with individual personality. *Current Zoology*, *63*(5), pp.561-567.

2016

22. **Wright, C.M.**, Keiser, C.N. and Pruitt, J.N., 2016. Colony personality composition alters colony-level plasticity and magnitude of defensive behaviour in a social spider. *Animal Behaviour*, *115*, pp.175-183.
23. Keiser, C.N., **Wright, C.M.** and Pruitt, J.N., 2016. Increased bacterial load can reduce or negate the effects of keystone individuals on group collective behaviour. *Animal Behaviour*, *114*, pp.211-218.

2015

24. Keiser, C.N.*, **Wright, C.M.*** and Pruitt, J.N., 2015. Warring arthropod societies: social spider colonies can delay annihilation by predatory ants via reduced apparency and increased group size. *Behavioural Processes*, *119*, pp.14-21.
25. **Wright, C.M.**, Keiser, C.N. and Pruitt, J.N., 2015. Personality and morphology shape task participation, collective foraging and escape behaviour in the social spider *Stegodyphus dumicola*. *Animal Behaviour*, *105*, pp.47-54.
26. Modlmeier, A.P., Keiser, C.N., **Wright, C.M.**, Lichtenstein, J.L. and Pruitt, J.N., 2015. Integrating animal personality into insect population and community ecology. *Current Opinion in Insect Science*, *9*, pp.77-85.
27. Keiser, C.N., **Wright, C.M.**, Singh, N., DeShane, J.A., Modlmeier, A.P. and Pruitt, J.N., 2015. Cross-fostering by foreign conspecific queens and slave-making workers influences individual- and colony-level personality. *Behavioral Ecology and Sociobiology*, *69*(3), pp.395-405.

2014 & Earlier

28. **Colin M. Wright** (2012). The Impact of Traditional and Folk Medicine on Biodiversity. *The Science in Society Review*, UC Davis, Fall: 25-27.

*Signifies equal work by authors

Manuscripts In Preparation

1. Wright, C.M., Hilton, E.N., Biological sex: binary or spectrum? *Biology Letters*

Journals I have reviewed for: *Proceedings of the Royal Society*, *Animal Behaviour*, *Behavioral Ecology*, *Scientific Reports*, *PLoS One*, *Journal of Animal Ecology*, *Behavioral Ecology and Sociobiology*, *Behavior*, *Ethology*, *Journal of Arachnology, Ethology Ecology and Evolution*, *Israel Journal of Ecology & Evolution*, and *Journal of Insect Science*.

References	Title	Email
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