

# Stanford

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## Virginia Winn

Associate Professor of Obstetrics and Gynecology (Reproductive and Stem Cell Biology) at the Stanford University Medical Center

Obstetrics & Gynecology - Reproductive Biology

### CLINICAL OFFICES

- **Perinatal Diagnostic Center**

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Palo Alto, CA 94304

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### ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

Daychin Campbell - Administrative Associate

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## Bio

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### CLINICAL FOCUS

- Maternal and Fetal Medicine

### ACADEMIC APPOINTMENTS

- Associate Professor - Med Center Line, Obstetrics & Gynecology - Reproductive Biology
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)

### ADMINISTRATIVE APPOINTMENTS

- Director of Perinatal Biology, Stanford University School of Medicine, (2014- present)

### PROFESSIONAL EDUCATION

- PhD Training: University of Rochester School of Medicine (1994)
- Board Certification: Maternal and Fetal Medicine, American Board of Obstetrics and Gynecology (2009)
- Board Certification: Obstetrics and Gynecology, American Board of Obstetrics and Gynecology (2005)
- Fellowship: UCSF (2003) CA
- Residency: UCSF (2000) CA
- Medical Education: University of Rochester School of Medicine (1996) NY

## Teaching

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### STANFORD ADVISEES

#### Postdoctoral Faculty Sponsor

Amy Braun, Tianyanxin Sun

#### Doctoral Dissertation Co-Advisor (NonAC)

Kenisha Puckett

**Doctoral Dissertation Reader (NonAC)**

Nora Vivanco Gonzalez

**Postdoctoral Research Mentor**

Tianyanxin Sun

**GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS**

- Stem Cell Biology and Regenerative Medicine (Phd Program)

**Publications**

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**PUBLICATIONS**

- **Maternal Height and Risk of Preeclampsia among Race/Ethnic Groups** *AMERICAN JOURNAL OF PERINATOLOGY*  
Maric, I., Mayo, J. A., Druzin, M. L., Wong, R. J., Winn, V. D., Stevenson, D. K., Shaw, G. M.  
2019; 36 (8): 864–71
- **Impact of Assisted Reproduction on Maternal Vascular Health in Pregnancy and Postpartum.**  
von Versen-Hoeynck, F., Narasimhan, P., Tierney, E., Baker, V. L., Winn, V. D.  
SAGE PUBLICATIONS INC.2019: 281A–282A
- **Increased Preeclampsia Risk and Reduced Aortic Compliance With In Vitro Fertilization Cycles in the Absence of a Corpus Luteum** *HYPERTENSION*  
von Versen-Hoeynck, F., Schaub, A. M., Chi, Y., Chiu, K., Liu, J., Lingis, M., Williams, R., Rhoton-Vlasak, A., Nichols, W. W., Fleischmann, R. R., Zhang, W., Winn, V. D., Segal, et al  
2019; 73 (3): 640–49
- **Absent or Excessive Corpus Luteum Number Is Associated With Altered Maternal Vascular Health in Early Pregnancy** *HYPERTENSION*  
von Versen-Hoeynck, F., Narasimhan, P., Tierney, E., Martinez, N., Conrad, K. P., Baker, V. L., Winn, V. D.  
2019; 73 (3): 680–90
- **Murine trophoblast-derived and pregnancy-associated exosome-enriched extracellular vesicle microRNAs: Implications for placenta driven effects on maternal physiology** *PLOS ONE*  
Stefanski, A. L., Martinez, N., Peterson, L. K., Callahan, T. J., Treacy, E., Luck, M., Friend, S. F., Hermes, A., Maltepe, E., Phang, T., Dragone, L. L., Winn, V. D.  
2019; 14 (2)
- **Absent or Excessive Corpus Luteum Number Is Associated With Altered Maternal Vascular Health in Early Pregnancy.** *Hypertension (Dallas, Tex. : 1979)*  
von Versen-Hoeynck, F., Narasimhan, P., Selamet Tierney, E. S., Martinez, N., Conrad, K. P., Baker, V. L., Winn, V. D.  
2019: HYPERTENSIONAHA11812046
- **Differential Dynamics of the Maternal Immune System in Healthy Pregnancy and Preeclampsia.** *Frontiers in immunology*  
Han, X., Ghaemi, M. S., Ando, K., Peterson, L. S., Ganio, E. A., Tsai, A. S., Gaudilliere, D. K., Stelzer, I. A., Einhaus, J., Bertrand, B., Stanley, N., Culos, A., Tanada, et al  
2019; 10: 1305
- **Maternal Vascular Health in Pregnancy and Postpartum After Assisted Reproduction.** *Hypertension (Dallas, Tex. : 1979)*  
von Versen-Hoeynck, F., Häckl, S., Selamet Tierney, E. S., Conrad, K. P., Baker, V. L., Winn, V. D.  
2019: HYPERTENSIONAHA11913779
- **Placental lipoprotein lipase activity is positively associated with newborn adiposity** *PLACENTA*  
Heerwagen, M. R., Gumina, D. L., Hernandez, T. L., Van Pelt, R. E., Kramer, A. W., Janssen, R. C., Jensen, D. R., Powell, T. L., Friedman, J. E., Winn, V. D., Barbour, L. A.  
2018; 64: 53–60
- **Mapping the Fetomaternal Peripheral Immune System at Term Pregnancy.** *Journal of immunology*  
Fragiadakis, G. K., Baca, Q. J., Gherardini, P. F., Ganio, E. A., Gaudilliere, D. K., Tingle, M., Lancero, H. L., McNeil, L. S., Spitzer, M. H., Wong, R. J., Shaw, G. M., Darmstadt, G. L., Sylvester, et al  
2016

- **Differential expression of human placental PAPP-A2 over gestation and in preeclampsia.** *Placenta*  
Kramer, A. W., Lamale-Smith, L. M., Winn, V. D.  
2016; 37: 19-25
- **Umbilical Cord Blood Circulating Progenitor Cells and Endothelial Colony-Forming Cells Are Decreased in Preeclampsia.** *Reproductive sciences*  
Gumina, D. L., Black, C. P., Balasubramaniam, V., Winn, V. D., Baker, C. D.  
2016: 1933719116678692-?
- **Characterization of choline transporters in the human placenta over gestation** *PLACENTA*  
Baumgartner, H. K., Trinder, K. M., Galimanis, C. E., Post, A., Phang, T., Ross, R. G., Winn, V. D.  
2015; 36 (12): 1362-1369
- **Baseline placental growth factor levels for the prediction of benefit from early aspirin prophylaxis for preeclampsia prevention** *PREGNANCY HYPERTENSION-AN INTERNATIONAL JOURNAL OF WOMENS CARDIOVASCULAR HEALTH*  
Moore, G. S., Allshouse, A. A., Winn, V. D., Galan, H. L., Heyborne, K. D.  
2015; 5 (4): 280-286
- **In-depth characterization of immune cells in preeclampsia using Multiplexed Ion Beam Imaging by Time-of-Flight (MIBI-TOF)**  
Greenbaum, S., Bosse, M., Baranski, A., Khair, Z., Bruce, T., Tebaykin, D., Oliveria, J., Bendall, S. C., Winn, V. D., Angelo, M.  
MOSBY-ELSEVIER.2020: S156-S157
- **Differential Dynamics of the Maternal Immune System in Healthy Pregnancy and Preeclampsia** *FRONTIERS IN IMMUNOLOGY*  
Han, X., Ghaemi, M. S., Ando, K., Peterson, L. S., Ganio, E. A., Tsai, A. S., Gaudilliere, D. K., Stelzer, I. A., Einhaus, J., Bertrand, B., Stanley, N., Culos, A., Tanada, et al  
2019; 10
- **Data-Driven Queries between Medications and Spontaneous Preterm Birth among 2.5 Million Pregnancies: Association with Genital Herpes and Antiviral Drugs.**  
Maric, I., Borisenko, E., Winn, V. D., Weber, K. A., Wong, R. J., Aziz, N., Blumenfeld, Y. J., El-Sayed, Y. Y., Stevenson, D. K., Shaw, G. M.  
SAGE PUBLICATIONS INC.2019: 389A
- **Differential Dynamics of the Maternal Immune System in Healthy Pregnancy and Preeclampsia.**  
Han, X., Ghaemi, M. S., Ando, K., Peterson, L., Ganio, E. A., Tsai, A. S., Gaudilliere, D., Einhaus, J., Tsai, E. S., Stanley, N. M., Culos, A., Taneda, A. H., Fallahzadeh, et al  
SAGE PUBLICATIONS INC.2019: 271A
- **Increased Preeclampsia Risk and Reduced Aortic Compliance With In Vitro Fertilization Cycles in the Absence of a Corpus Luteum.** *Hypertension (Dallas, Tex. : 1979)*  
von Versen-Hoynck, F., Schaub, A. M., Chi, Y., Chiu, K., Liu, J., Lingis, M., Stan Williams, R., Rhoton-Vlasak, A., Nichols, W. W., Fleischmann, R. R., Zhang, W., Winn, V. D., Segal, et al  
2019: HYPERTENSIONAHA11812043
- **Multomics modeling of the immunome, transcriptome, microbiome, proteome and metabolome adaptations during human pregnancy** *BIOINFORMATICS*  
Ghaemi, M., DiGiulio, D. B., Contrepolis, K., Callahan, B., Ngo, T. M., Lee-McMullen, B., Lehallier, B., Robaczewska, A., Mcilwain, D., Rosenberg-Hasson, Y., Wong, R. J., Quaintance, C., Culos, et al  
2019; 35 (1): 95-103
- **Data-driven queries between medications and spontaneous preterm birth among 2.5 million pregnancies.** *Birth defects research*  
Mari#, I., Winn, V. D., Borisenko, E., Weber, K. A., Wong, R. J., Aziz, N., Blumenfeld, Y. J., El-Sayed, Y. Y., Stevenson, D. K., Shaw, G. M.  
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- **Murine trophoblast-derived and pregnancy-associated exosome-enriched extracellular vesicle microRNAs: Implications for placenta driven effects on maternal physiology.** *PloS one*  
Stefanski, A. L., Martinez, N., Peterson, L. K., Callahan, T. J., Treacy, E., Luck, M., Friend, S. F., Hermes, A., Maltepe, E., Phang, T., Dragone, L. L., Winn, V. D.  
2019; 14 (2): e0210675
- **Multomics modeling of the immunome, transcriptome, microbiome, proteome and metabolome adaptations during human pregnancy.** *Bioinformatics (Oxford, England)*  
Ghaemi, M. S., DiGiulio, D. B., Contrepolis, K., Callahan, B., Ngo, T. T., Lee-McMullen, B., Lehallier, B., Robaczewska, A., Mcilwain, D., Rosenberg-Hasson, Y., Wong, R. J., Quaintance, C., Culos, et al

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- **Maternal Height and Risk of Preeclampsia among Race/Ethnic Groups.** *American journal of perinatology*  
Maric, I., Mayo, J. A., Druzin, M. L., Wong, R. J., Winn, V. D., Stevenson, D. K., Shaw, G. M.  
2018
- **Residential agricultural pesticide exposures and risks of preeclampsia.** *Environmental research*  
Shaw, G. M., Yang, W., Roberts, E. M., Aghaeepour, N., Mayo, J. A., Weber, K. A., Maric, I., Carmichael, S. L., Winn, V. D., Stevenson, D. K., English, P. B.  
2018; 164: 546–55
- **Residential agricultural pesticide exposures and risks of preeclampsia** *ENVIRONMENTAL RESEARCH*  
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2018; 164: 546–55
- **Occurrence of Selected Structural Birth Defects Among Women With Preeclampsia and Other Hypertensive Disorders** *AMERICAN JOURNAL OF EPIDEMIOLOGY*  
Weber, K. A., Mayo, J. A., Carmichael, S. L., Stevenson, D. K., Winn, V. D., Shaw, G. M.  
2018; 187 (4): 668–76
- **Maternal Height and Risk of Preeclampsia.**  
Maric, I., Mayo, J. A., Druzin, M. L., Wong, R. J., Winn, V. D., Stevenson, D. K., Shaw, G. M.  
SAGE PUBLICATIONS INC.2018: 207A–208A
- **An immune clock of human pregnancy** *SCIENCE IMMUNOLOGY*  
Aghaeepour, N., Ganio, E. A., Mcilwain, D., Tsai, A. S., Tingle, M., Van Gassen, S., Gaudilliere, D. K., Baca, Q., McNeil, L., Okada, R., Ghaemi, M. S., Furman, D., Wong, et al  
2017; 2 (15)
- **A Proteomic Clock of Human Pregnancy.** *American journal of obstetrics and gynecology*  
Aghaeepour, N., Lehallier, B., Baca, Q., Ganio, E. A., Wong, R. J., Ghaemi, M. S., Culos, A., El-Sayed, Y. Y., Blumenfeld, Y. J., Druzin, M. L., Winn, V. D., Gibbs, R. S., Tibshirani, et al  
2017
- **An immune clock of human pregnancy.** *Science immunology*  
Aghaeepour, N., Ganio, E. A., Mcilwain, D., Tsai, A. S., Tingle, M., Van Gassen, S., Gaudilliere, D. K., Baca, Q., McNeil, L., Okada, R., Ghaemi, M. S., Furman, D., Wong, et al  
2017; 2 (15)
- **A novel quantitative microarray antibody capture (Q-MAC) assay identifies an extremely high HDV prevalence amongst HBV infected Mongolians.** *Hepatology*  
Chen, X., Oidovsambuu, O., Liu, P., Grosely, R., Elazar, M., Winn, V. D., Fram, B., Boa, Z., Dai, H., Dashteren, B., Yagaanbuyant, D., Genden, Z., Dashdorj, et al  
2016
- **Preeclampsia Associated with Functional Changes in Cord Blood Endothelial Progenitor Cells.**  
Gumina, D. L., Black, C. P., Balasubramaniam, V., Baker, C. D., Winn, V. D.  
SAGE PUBLICATIONS INC.2016: 63A–64A
- **Hepatitis C Virus Sensing by Human Trophoblasts Induces Innate Immune Responses and Recruitment of Maternal NK Cells: Potential Implications for Limiting Vertical Transmission.** *Journal of immunology*  
Giugliano, S., Petroff, M. G., Warren, B. D., Jasti, S., Linscheid, C., Ward, A., Kramer, A., Dobrinskikh, E., Sheiko, M. A., Gale, M., Golden-Mason, L., Winn, V. D., Rosen, et al  
2015; 195 (8): 3737–3747
- **A Hertzian contact mechanics based formulation to improve ultrasound elastography assessment of uterine cervical tissue stiffness** *JOURNAL OF BIOMECHANICS*  
Briggs, B. N., Stender, M. E., Muljadi, P. M., Donnelly, M. A., Winn, V. D., Ferguson, V. L.  
2015; 48 (9): 1524–1532
- **Acute Subclinical Maternal Inflammation in Late Pregnancy**  
Ozen, M., Zhao, H., Winn, V. D., Lewis, D. B., Kalish, F., Palmer, T. D., Wong, R. J., Stevenson, D. K.  
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- **Inflammatory predictors of neurologic disability after preterm premature rupture of membranes.** *American journal of obstetrics and gynecology*  
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- **Maternal and fetal alternative complement pathway activation in early severe preeclampsia.** *American journal of reproductive immunology (New York, N.Y. : 1989)*  
Hoffman, M. C., Rumer, K. K., Kramer, A., Lynch, A. M., Winn, V. D.  
2014; 71 (1): 55–60
- **The discovery of a reciprocal relationship between tyrosine-kinase signaling and cullin neddylation.** *PloS one*  
Friend, S. F., Peterson, L. K., Treacy, E., Stefanski, A. L., Sosinowski, T., Pennock, N. D., Berger, A. J., Winn, V. D., Dragone, L. L.  
2013; 8 (10): e75200
- **Siglec-6 is expressed in gestational trophoblastic disease and affects proliferation, apoptosis and invasion.** *Endocrine-related cancer*  
Rumer, K. K., Post, M. D., Larivee, R. S., Zink, M., Uyenishi, J., Kramer, A., Teoh, D., Bogart, K., Winn, V. D.  
2012; 19 (6): 827–40
- **Pandemic influenza A H1N1 2009 infection versus vaccination: a cohort study comparing immune responses in pregnancy.** *PloS one*  
Fisher, B. M., Van Bockern, J., Hart, J., Lynch, A. M., Winn, V. D., Gibbs, R. S., Weinberg, A.  
2012; 7 (3): e33048
- **Pre-eclampsia is associated with elevated CXCL12 levels in placental syncytiotrophoblasts and maternal blood** *EUROPEAN JOURNAL OF OBSTETRICS & GYNECOLOGY AND REPRODUCTIVE BIOLOGY*  
Schanz, A., Winn, V. D., Fisher, S. J., Blumenstein, M., Heiss, C., Hess, A. P., Kruessel, J. S., McMaster, M., North, R. A.  
2011; 157 (1): 32–37
- **The Impact of Preeclampsia on Gene Expression at the Maternal-Fetal Interface.** *Pregnancy hypertension*  
Winn, V. D., Gormley, M., Fisher, S. J.  
2011; 1 (1): 100–108
- **Severe Preeclampsia-Related Changes in Gene Expression at the Maternal-Fetal Interface Include Sialic Acid-Binding Immunoglobulin-Like Lectin-6 and Pappalysin-2** *ENDOCRINOLOGY*  
Winn, V. D., Gormley, M., Paquet, A. C., Kjaer-Sorensen, K., Kramer, A., Rumer, K. K., Haimov-Kochman, R., Yeh, R., Overgaard, M. T., Varki, A., Oxvig, C., Fisher, S. J.  
2009; 150 (1): 452–62
- **Cytotrophoblast induction of arterial apoptosis and lymphangiogenesis in an in vivo model of human placentation** *JOURNAL OF CLINICAL INVESTIGATION*  
Red-Horse, K., Rivera, J., Schanz, A., Zhou, Y., Winn, V., Kapidzic, M., Maltepe, E., Okazaki, K., Kochman, R., Vo, K., Giudice, L., Erlebacher, A., McCune, et al  
2006; 116 (10): 2643–52
- **Echogenic intracardiac focus - Potential for misdiagnosis** *JOURNAL OF ULTRASOUND IN MEDICINE*  
Winn, V. D., Sonson, J., Filly, R. A.  
2003; 22 (11): 1207–14