

# Jeffrey Simons

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## Education:

2005-Present      Central High School  
Philadelphia, PA, 19124  
Cumulative Weighted GPA: 3.85

## Science Research:

2007-Present      Student Assistant in Cukierman Lab at Fox Chase Cancer Center  
Investigating cell signaling and cancer invasiveness using *in vivo*-like  
extracellular matrix culture systems.

2005-2006          Howard Hughes Medical Institute Program at Fox Chase Cancer Center  
(Cukierman Lab, Basic Science / Tumor Cell Biology).  
Study of breast cancer invasive behaviors within *in-vivo*-like extracellular  
matrix culture systems.

## Achievements in Science Fairs:

2008                  1<sup>st</sup> Place Pennsylvania Junior Academy of Science (biology category)

2007                  1<sup>st</sup> Place George Washington Carver Science Fair (Medicine & Health  
category), 1<sup>st</sup> Place, Perfect Score Pennsylvania Junior Academy of  
Science Regional Competition (Biology category), 1<sup>st</sup> Place, Perfect Score  
Pennsylvania Junior Academy of Science State Competition (biology  
category), 3<sup>rd</sup> Place Delaware Valley Science Fair, Philadelphia Drug  
Exchange Award.

2006                  1<sup>st</sup> Place George Washington Carver Science Fair (Medicine & Health  
category), 1<sup>st</sup> Place Pennsylvania Junior Academy of Science Regional  
Competition (Biology category), 1<sup>st</sup> Place, Perfect Score Pennsylvania  
Junior Academy of Science State Competition (Biology category), 2<sup>nd</sup>  
Place Delaware Valley Science Fair (Medicine & Health category),  
Centocor Biotechnology Award, Philadelphia Drug Exchange Award.

## Publications/Posters:

2009                  Castelló-Cros R, Khan D, Simons J, Valianou M, Cukierman E. “Staged  
stromal 3D extracellular matrices differentially regulate breast cancer cell  
responses through PI3K and beta1-integrins.” 2<sup>nd</sup> revision BMC Cancer.

- 2009                      Castello-Cros R, Khan D, Simons J, Valianou M, and Cukierman E. “Staging Tumor-Associated Stroma to Study Epithelial 3D *in vivo*-like Cancer Cell Responses.” Poster presented at Keystone Symposium for Extrinsic Control of Tumor Genesis and Progression. Vancouver, BC.
- 2008                      Castello-Cros R, Simons J, and Cukierman E. “Effects of fibroblast-derived 3D Matrices on Breast Cancer Invasion.” Poster presented at Gordon Research Conference for Signal Transduction By Engineered Extracellular Matrices. Lewiston, ME.

**Volunteer History:**

- 2005-Present            Mentor of C.C.A Baldi Middle School robotics team.

**Technical Skills:**

- 2005-Present            Western blotting, preparation and culture of 3D matrices, primary and regular cell culturing, digital imaging analyses using the Metamorph program, cell invasion assays, cell morphology analyses, confocal microscopy, immunofluorescence. Assisted in development of novel system to assess cell morphology, velocity, and directionality within 3D *in-vivo* like matrix cultures.

**School Organizations:**

- 2005-2007                Member of school robotics team, The Robolancers.
- 2006-2008                Layout Editor of high school newspaper, *The Centralizer*.
- 2008-Present            Vice President of guitar club.