

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors. Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Almon, Amanda

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Associate Professor of Biomedical Art and Visualization

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	Completion Date MM/YYYY	FIELD OF STUDY
Rochester Institute of Technology, Rochester	B.F.A	05/2000	Medical Illustration
University of Michigan, Ann Arbor	M.F.A.	05/2002	Biomedical Visualization
Association of Medical Illustrators	C.M.I.	06/052007	Certification Examination for Medical Illustration
Global and Continuing Education Harvard Institutes of Medicine, Harvard Medical School	APA/CME Training (8 credits)	5/2018	Understanding Addiction/Substance Abuse Disorders

**A. Personal Statement**

I have the expertise, leadership, training, and motivation necessary to successfully inform, develop and evaluate the usability of interactive visualization prototypes of electronic health records in the proposed NIH R15 research project. I have a broad background in medical and scientific visualization in media production: 2D/3D graphics, illustrations, diagrams, virtual/augmented reality design, interactive and user experience design, and data visualization. I have very specialized training and skills which combines 2 years of medical school with art media production on multiple visualization platforms. Additionally, with a background in art historical content, new media literacy and medicine/science, I am uniquely qualified to provide critical analysis and conduct expert reviews of current medical and scientific visualizations and designed applications. As Co-PI on university and externally-funded grants, I laid the foundation for the proposed research by developing effective, innovative visual content and designs which helped support user training and feedback through testing protocols with medical experts and general public participants. My contributions and visualizations have been presented at the Association of Medical Illustrators, the Guild of Natural Science Illustrators and the Popular Culture Association/American Culture Association. Additionally, my work has been published across numerous platforms including print and e-journals, film/tv, marketing advertisements, patient websites, educational games and simulations, with a recent noteworthy example of completing a series of 32 bilingual animations for the BWH/Harvard Medical School Department of Neurosurgery and Partners Health Care. I have successfully managed and mentored over 20 undergraduate and graduate students on grant projects, including 5 current grant-funded students (e.g., student recruitment, research and art direction, timeline protections, production asset development and budget allocations for student salary and equipment). I have collaborated with other researchers, and have produced software applications and media that appear in peer-reviewed and commercially produced publications. As a result of my cumulative experiences, I am ideally-suited to assist on grant execution, management and overall design conceptualization, development and refinement to meet user needs, which can positively impact users and create a foundation for future research.

- a. Gormley, B. W., Almon, A. Neurological Surgical Spine Intervention 3D Animations and 2D Patient Education Animation Series (32 total); Created for Partners Health Care; Brigham and Women's Hospital, Department of Neurosurgery, Harvard Medical School Building for Transformative

Medicine, Boston, MA. © 2020

- b. Ku, B., Lupton, E. Health Design Thinking: Creating Products and Services for Better Health, New York, NY, ISBN: 9780262539135, MIT Press, p 44. Almon, A. Created book chapter illustration: Insidious Infection (Almon, A. Book Chapter Illustration.) Smithsonian Institution Contract #C-18000831-0000; 2020.
- c. Nagele, R., Libon, D. Editor, Vascular Disease, Alzheimer's, and Mild Cognitive Impairment: An Integrated Approach. Chapter Title: Potential of blood- and CSF-based biomarkers for AD diagnostics. Illustration, Origin and Fate of Alzheimer's Disease Blood-based Biomarkers in Blood and CSF: Sagittal View of and Alzheimer's Brain Showing Neurodegeneration, Almon, A. Created book chapter illustration. 2019.

## **B. Positions and Honors**

### **Positions and Employment**

- |           |   |
|-----------|---|
| 2005-2010 | Assistant Professor, Biomedical Art, Cleveland Institute of Art, Cleveland, OH  |
| 2005-2014 | Adjunct Faculty, Department of Anatomy, Case Western Reserve University, Cleveland, OH  |
| 2005-2014 | Chair, Department of Biomedical Art, Cleveland Institute of Art, Cleveland, OH  |
| 2010-2014 | Associate Professor, Biomedical Art, Game Design, Animation, Cleveland Institute of Art, Cleveland, OH  |
| 2010-2014 | Chair, Department of Biomedical Art, Game Design, Animation, Cleveland Institute of Art, Cleveland, OH  |
| 2014-2020 | Assistant Professor, Biomedical Art & Visualization BFA, Department of Radio, TV and Film, Rowan University, Glassboro NJ                       |
| 2014-     | Instructor Biomedical Sciences (Secondary Faculty Appointment) Cooper Medical School at Rowan University, Camden, NJ                            |
| 2014-     | Program Coordinator, Biomedical Art and Visualization BFA, Department of Radio, TV and Film, Rowan University, Glassboro NJ                     |
| 2018-     | Program Coordinator, Certificate of Undergraduate Study in Game Media Design, Department of Radio, TV and Film, Rowan University, Glassboro, NJ |
| 2020-     | Associate Professor, Biomedical Art & Visualization BFA, Department of Radio, TV and Film, Rowan University, Glassboro NJ                       |

### **Other Experience and Professional Memberships**

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|-----------|--|
| 2000-     | Director/Contractor, Medical and Scientific Illustrator, Animator, BioMed Visuals/BioArt Media: Medical & Scientific Media Company, Sewell, NJ / New York, NY. |
| 2002-2005 | 3D Medical Animator & Medical Illustrator, Visible Productions LLC, Fort Collins, CO   |
| 2005-     | Professional Member & Certified Medical Illustrator, Association of Medical Illustrators   |
| 2007-2009 | Interim Creative Director & Strategic Planning Consultant, Lachina Publishing Services, Beachwood, OH  |
| 2007-2016 | Medical & Scientific Animation Contractor, That's Nice Productions, New York, NY.  |
| 2010-2012 | Executive Director of Innovation & Media Development, Lachina Publishing Services, Beachwood, OH   |
| 2010-     | Professional Member, Guild of Natural Science Illustrators   |
| 2012-2016 | Videographer, Editor, Animator, From Castle to Castle Productions, Cleveland, OH.  |
| 2012-2016 | Illustrator, Graphic Designer & Animator, Lemming Labs Ltd., Cleveland, OH.  |
| 2012-2016 | Illustrator & Animator, Atbosch Media, Cleveland, OH.  |
| 2015-     | Executive Board Member, Critical Practices Inc.  |

### **Honors**

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|------|---|
| 2004 | Association of Medical Illustrators, Certificate of Merit, Multimedia Category. For Novartis Animal Health, Interactive CDROM: My dog may have osteoarthritis. Now what? Visible Productions LLC. Major Medical Artist Contributor. AMI Salon Award, Fort Collins, CO |
| 2004 | Medical Marketing Association, Silver IN-AWE Award, For Zimmer Orthopedic Center of the Rockies, Interactive Patient Education CDROM: Total Knee Replacement. Visible Productions LLC. Medical Artist Contributor, Fort Collins, CO                                   |

- 2009 Residency Awarded: Thematic, The Analogous Fields of Art and Science, The Banff Centre of the Arts, Alberta, Canada
- 2013 Outstanding Achievement Award, Ohio Local History Alliance, SimMarch 1812, Apple OS Tablet, Educational Application for Fort Meigs, Toledo, OH

### **C. Contributions to Science**

1. My medical and scientific illustration, animation and media works have been published and used in multiple publications, websites, media platforms and within grant research projects. I am an active biomedical illustrator and animator, specifically my ongoing contributions to science are in the areas of: patient education, pharmaceutical/cell biology, medical device animations, educational interactive virtual reality and augmented reality simulations and games. My previous work has been for television, film, websites, tradeshow, Business to Business (B2B) marketing/training, grant funded projects, textbooks and journals. My medical animation work has been viewed on the Discovery Channel, Oprah Winfrey with Dr. Oz, (contracted through Visible Productions,) That's Nice Productions, AgencyRX, Lemming Labs, McGraw-Hill, Lachina Publishing Services, Prentice I, etc. Currently, I am working on multiple grant-funded projects to develop simulations for surgical operations, government and military operations, and ongoing patient animations/illustrations in medical areas related to neurological conditions. The select citations below note my recent record of completed works with specific contributions to science and medicine.
  - a. Clavell-Hernández, J. Aly, S., Wang, R., Sadeghi-Nejad, H. Penile Prosthesis Reservoir Removal: Surgical Description and Patient Outcomes. Almon, A. Created 6 Illustration Series for The Journal of Sexual Medicine, volume 16, Issue 1, 2019, Pages 146-152, ISSN 1743-6095, <https://doi.org/10.1016/j.jsxm.2018.11.002>.
  - b. Sochol, R. (Inventor) Overview of the Proposed Nano3D Printing Approach to Mimic the 3D Complexity of the Kidney (Statement of Invention Illustration.) Almon, A. created 3D Models and final medical illustration for Figure #1 for the "Statement of Invention: Invent a nano3D printing-based approach to mimic the 3D structural and physiological sophistication of renal systems of the body in order to reproduce kidney functions with unprecedented accuracy and exploratory control." The Gordon And Betty Moore Foundation, Moore Inventor Fellows – Natural Science, University of Maryland, College Park, MD. 2016.
  - c. Almon, A. Light on Gout Augmented Reality Mobile Application for AstraZeneca and Medimmune Pharmaceuticals, created 3D Models of Five Regions of Anatomy: Knee, Hand, Foot, Spine and Lung with Normal, Moderate, and Severe Gout Conditions, created for AgencyRx, New York, NY. 2015.
  - d. Almon, A. (Co-listed as an inventor) U.S. Patent: Interactive mobile learning (I.M.L) platform US 20130122980 A1, (a computer implemented learning and assessment apparatus includes a database having at least one set of educational game parameters). 2012.

### **Complete List of Published Work in My Bibliography and Portfolio:**

<https://bioartmedia.com/home.html>

### **D. Additional Information: Research Support and/or Scholastic Performance**

#### **Ongoing Research Support**

Mandayam, S., Schmalzel, J., Bouaynaya, N., Tremoulet, P., Almon, A., Lecakes, G. (2021 – 2025). United States Department of Defense: Turret Gunner Survivability and Simulation Environment (TGSSE) Increment I and II Project(s). \$5,400,000 (Recent press articles can be found here:

[https://www.army.mil/article/255320/new\\_soldier\\_protection\\_turret\\_developed\\_for\\_armored\\_multi\\_purpose\\_vehicle](https://www.army.mil/article/255320/new_soldier_protection_turret_developed_for_armored_multi_purpose_vehicle) and <https://today.rowan.edu/news/2021/10/army-project-underway-at-rowan-virtual-reality-center-in-camden.html> and <https://today.rowan.edu/news/2023/01/ai-engineering-reshaping-future-combat.html>)

Role: Co-Investigator

Kim, T. (PI), Mandayam, S., Almon, A. (2019 – 2021) Grant Award, Rowan University Camden Health Grant. Art, Engineering and Medicine for Enhancing Orthopedic Resident Entrustability: Bringing Virtual and Augmented Reality Technology to Camden, NJ. \$148,434.

Role: Co-Investigator

Rich, J. (PI), Mandayam, S., Almon, A., Lecakes, G. (2019 – 2022) Rowan University Internal Funded Proposal: Teaching and Learning about the Holocaust through VR (Virtual Reality) and AR (Augmented Reality) \$200,000.

Role: Co-Investigator

### **Completed Research Support**

Almon, A., Bowman, S. (2017 – 2019). Rowan University, College of Communication and Creative Arts STORI Grant Award: Experiential Storytelling Conference. \$7,650.

Jahan, K., (PI) Tang, Y., Bhavsar, P. (Co-PI), Almon, A. Bowman, S. (Faculty visualization consultants) (2016–2018). NSF IUSE: Algae Grows the Future-Project: Aims at the Multifaceted use Algae to Teach Science and Engineering. \$300,000

Almon, A. (PI), Bowman, S. (2016 – 2017). Rowan University: Innovations in Teaching using Technology Faculty Center Grant: Integration of Portable, Accessible and Scalable Classroom Virtual Reality: \$2,500.

Hickman, R. (PI), Almon A., White. R., Clochesy, J., Buchner, M. (2015 – 2020).1R01NR015750-0; NIH (National Institute of Nursing Research): ESMART version 3.0: A Clinical Trial of Decision Support for End of Life Care Among Surrogate Decision Makers of the Chronically Critically Ill. Award: Case Western Reserve University: \$2,300,000. Subaward: Rowan University: \$26,400.