



Scalfani Creates 3D Image of a DNA Sequence: May Help in Fight Against Cancer

The first 3D print of a G-quadruplex DNA sequence and its molecular structure was recently created at The University of Alabama in the UA's College of Engineering's 3D Printing Lab, allowing researchers a potentially valuable new tool in the fight against cancer.

Dr. Vincent F. Scalfani, science and engineering librarian for UA Libraries, collaborated with Drs. Stephan A. Ohnmacht and Stephen Neidle, both researchers at the School of Pharmacy at University College London in the United Kingdom, to convert laboratory x-ray crystallography data of a G-quadruplex molecule and the drug targeting it into a 3D digital model suitable for 3D printing.

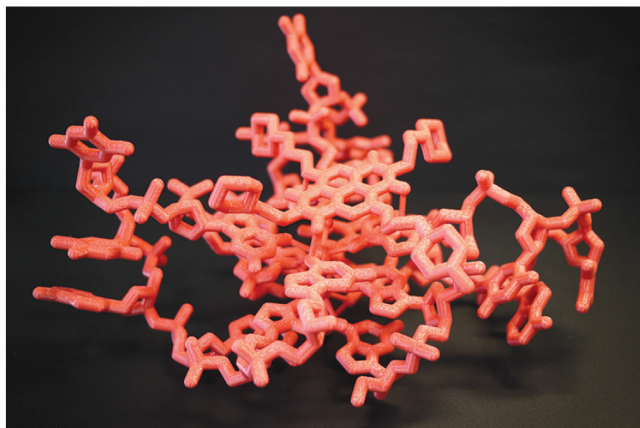
"The process showed just what the 3D Lab is capable of doing," Scalfani said.

"Preparing the G-quadruplex DNA sequence for 3D printing was a challenge and certainly pushed the limits of what we thought was possible in the UA 3D Lab," he said. "The structure is extremely intricate, containing multiple areas of stacked functional groups (the quadruplex) that are all surrounded by a common outer loop (the DNA backbone). The 3D printed G-quadruplex is stunning; you can see all of the symmetry, facets, and angles within the molecule."

The 3D printed model of the G-quadruplex DNA will be used to help students and researchers visualize the molecule's structure, and the model is already being used in pre-clinical studies for pancreatic cancer research.

Both Ohnmacht and Neidle say the power in 3D printing DNA sequences like these is that researchers can literally touch, hold, and better understand

See "Scalfani" on page 4



Movers & Shakers 2014: Community Builders

Dr. Vincent Scalfani was recently selected as one of 50 up-and-coming individuals from around the world named to the list of Movers and Shakers 2014 in the category of Community Builders by *Library Journal*. Movers and Shakers profile emerging leaders in the library world who are innovative, creative, and making a difference in moving libraries ahead.

Scalfani was nominated by The University of Alabama chemistry professor Paul Rugar for his outreach to students, faculty, and staff from 20 different UA departments and for his leadership role in the 3D printing studio at UA Libraries.

Scalfani is one of 2 librarians from UA Libraries and one of 6 people from the state to receive the distinguished award since *Library Journal* began recognizing individuals in 2002.



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Message From the Dean—

As the academic year draws to a close, it is only fitting to celebrate the many successful advances the University Libraries has made by continuing to redefine how libraries are experienced in the 21st century.

Perhaps the most widely noted is the success Dr. Vincent Scalfani has demonstrated in training students in the use of 3D printing. His expertise gained the attention of chemists at University College London and the Royal Society of Chemistry. His achievements with 3D printing led to Dr. Scalfani's recognition as one of only 50 early-career librarians worldwide to receive the prestigious 2014 Mover and Shaker Award conferred by *Library Journal*.

The library as publisher is a new role the Libraries assumed this past year. Steven Rowe authored *From a Love of History*, a 169-page guide to the A. S. Williams III Americana Collection. *The Journal of Sarah Haynsworth Gale, 1827-1835*, edited by Professor emerita Sarah Wiggins, makes available for the first time many details from the private life of Amelia Gayle Gorgas's mother.

Our print collections and online resources continue to grow at an exceptional rate. Several important 19th-century archival collections have been added to Hoole Library. In support of the University's MFA programs in the book arts and in memory of long-time member of the Libraries' administra-

tion, Kate W. Ragsdale, the Libraries assembled a unique collection of miniature books, each measuring three inches or less. This working collection will be used for the study of book design and to promote literacy and writing programs in public schools and libraries across Alabama.

Our largest online collection to date became available early in the academic year when we acquired access to some 5 million titles comprising more than 11 million volumes digitized by libraries in the Big Ten Conference and the University of California System.

The above examples are representative of how the University Libraries continues to enhance teaching and learning in diverse and new ways. Since July 2013, more than 1.4 million visitors have come through our doors, and some 15,000 students have received formal instruction in the use of the Libraries' print and online collections--more proof that no one ever graduated from a library, but no one ever graduated without one.



Dr. Louis A. Pitschmann,
Dean of Libraries

The University Libraries now have more than 550 public computers and laptops providing students with access to more than 150 academic software packages to support their class assignments and research projects. The Libraries' flexible hours and 24/5 access to Rodgers Library give students greater access to more high-level academic software applications than any other facility on campus. In addition, the University Libraries provide access to 467 full-text online resources ranging from historical newspapers to the latest scholarly research.



Current News and Events



The Kate Ragsdale Memorial Miniature Book Collection and the Miniature Book Society Display on View in Gorgas Library

The Miniature Book Society (MBS) traveling exhibition and the Kate W. Ragsdale Memorial Miniature Book Collection will be combined into one display viewable in the Pearce Lobby of the Amelia Gayle Gorgas Library during April and May. The MBS exhibition is generously sponsored by the Alabama Center for the Book. Dean Louis A. Pitschmann created the Memorial Miniature Book Collection to honor Kate Ragsdale's service to the University Libraries. Together, these two shows highlight the artistry required to create miniature books.

The MBS' traveling exhibition, featuring a diverse range of items showcasing the history of the art form, rotates through different sites throughout the year. The show will conclude its tour at the MBS' three-day convention this August in Boston, Massachusetts.

The Kate Ragsdale Memorial Miniature Book Collection, on show for the first time, contains ninety-six books from eleven countries, including Austria, France, Great Britain, Israel, the Soviet Union, and the United States. The Bible in miniature: or a *Concise History of the Old & New Testaments* [sic], published in 1780, is the oldest book in the collection. A wide variety of American presses are represented. Additionally, a series of miniature editions of Shakespeare's plays can be found.

The Memorial Miniature Book Collection was created to recognize Kate Ragsdale's life and career following her death in 2013. Ragsdale earned a bachelor's degree from Sweet Briar College and a master's degree in library science from The University of Alabama. She began her career as a program coordinator in the College of Business and Commerce before join-

ing the Libraries' administration team as a planning officer in 1987. Ragsdale managed construction and renovation projects, including the building of Mary Harmon Bryant Hall and the Library Annex, during her more than twenty years of service at the Capstone. Ragsdale frequently served as an officer in organizations such as the Alabama Library Association, the Special Libraries Association, and the Association of College and Research Libraries. In 2004, she received the UA Library Leadership Award for faculty. In 2012, she won the UA School of Library and Information Studies Alumni Award.

Miniature books, books that are smaller than three or four inches in height, were created to allow for greater portability. Aside from their size, miniature books are just

like any other book. They have covers, text, and even illustrations. While these tiny books have existed since the Babylonians, they became popular in the 19th century due to Napoleon Bonaparte. Napoleon collected miniature books, carrying them with him as he pursued his conquests. In the United States, miniature books enjoy a long history. Thumb Bibles, hymnals, satire, travelogues, and almanacs created by early settlers were often converted into tiny editions. Today, miniature books are often handmade in a limited edition as a type of artists' book.



Amy Hildreth Chen, CLIR postdoctoral fellow, Division of Special Collections

The Angelo Bruno Business Library, including the Baskinsky Computer Center, celebrated their 20th anniversary April 8, 2014. Cupcakes were served to library patrons including students, faculty, and staff to observe this special occasion. The state-of-the-art library serves the business information needs of The University of Alabama, and in particular the students and faculty of the Culverhouse College of Commerce and Business Administration and the Manderson Graduate School of Business.





Dean Pitschmann,

You already know this, but Brett and Michael deserve kudos for the great Library presentation they pulled together. This would not have been possible without the support that you and Millie provided them. Our initial feedback from the advisory board members has been positive. And I also appreciate the involvement of all the library personnel to make it happen yesterday. Now if they could just control the weather!!

Rick Funk

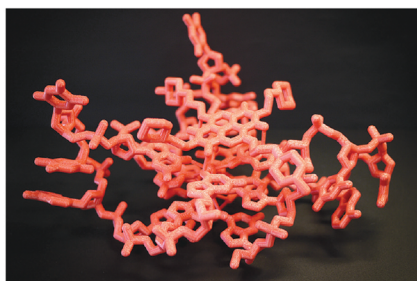
Director,
Undergraduate Admissions



Undergraduate Admissions brought in high school counselors from across the country in January to learn firsthand about the University. University Libraries hosted the day-long event with departmental presentations and a tour of Rodgers Library for Science and Engineering.

“Scalfani” *continued from page 1*

the biological target they’re aiming for. Before this, researchers had to rely on two-dimensional images.



“Having a live model is invaluable; visualizing distances of bonds, electrostatic interactions, and angles is easy and allows for further optimization of these anti-cancer molecules,” Ohnmacht said. “The printed 3D model is actually a real molecular structure that has been designed, synthesized, and then crystallized in the London labs.”

The unusual makeup of this DNA sequence required more than two dimensions for research.

“G-quadruplex DNA is unusual as it is four-stranded, not two stranded like ‘normal’ double helical DNA we know,” Ohnmacht said.

Bobby Mathews, University Relations, and
Donna Adcock, director, Public Relations,
University Libraries

Welcome New Library Leadership Board Members

Julian D. Butler – *Huntsville, Alabama*

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News from the Faculty and Staff

Jason Battles, associate dean, Library Technology Planning and Policy, contributed a chapter in the new book, *The Yellowhammer War*. Published to mark the Civil War's sesquicentennial, *The Yellowhammer War* collects new essays on Alabama's role in, and experience of, the bloody national conflict and its aftermath.



Mattie Compton, library assistant III, Division of Special Collections, retired December 31, 2013, after 35 years of service with University Libraries.

Beth Holley, head, Acquisitions, retired January 31, 2014, after working with University Libraries for more than 26 years.



L to R: Dean Louis Pitschmann and Beth Holley



Tom Land, institutional records analyst, Division of Special Collections, retired March 31, 2014 with more than 27 years of service with the Libraries.

Cynthia Miller, coordinator, Music, Fine & Performing Arts Collections, is the author of the music chapter in *Information Resources in the Humanities and the Arts*, 6th edition. The book was named one of the best professional books of 2013 by Teacher Librarian.



Connie Stovall was appointed head of Acquisitions on April 1, 2014. Stovall has been at Virginia Tech in various roles since 2006. She is currently serving as the co-chair for Collection Development for the Association of Southeastern Research Libraries. She earned her library degree and a master's

degree in English from The University of Alabama and a bachelor's degree in business administration in accounting from the University of North Alabama.



Denise Quintel was appointed web applications librarian on January 2, 2014. Quintel holds a bachelor's degree from Northeastern University and an master's degree in library science from the University of Tennessee. She has experience designing LibGuides and video tutorials at Middle Tennessee State

University as well as coordinating social media efforts at Free for Life International in Franklin, Tennessee.

Helga Visscher, head, McLure Library, retired July 31, 2013. Visscher retired with more than 32 years of service.



L to R: Dean Louis Pitschmann, Helga Visscher, and Dr. James McLean, former dean of the School of Education.



Emma Wilson joined University Libraries January 27, 2014, as Post-Doctoral Fellow for the Alabama Digital Humanities Center (ADHC). She holds a bachelor's degree and master's degree in Renaissance literature from the University of Cambridge, and gained her doctorate from the University of St. Andrews before working

as an instructor and Post-Doctoral Fellow in Canada and the United States, and earning a master's degree in library science at Western University, Ontario, Canada. Wilson's research specialization is in reconstructing early modern intellectual and literary networks, and she has most recently written a new history of logic from 1500 to 1750 which she will visualize in a digital environment at the ADHC.



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Contact Donna Adcock at (205) 348-1416, dbadcock@ua.edu, so that we may adjust our records.

See *"Gifts"* on page 7



***“Gifts”** continued from page 6*

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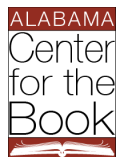
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Earl Tilford

Turning the Tide
The University of Alabama
in the 1960s

Thursday, May 15, 2014

Noon – 1:00 p.m.

Room 205, Gorgas Library

Free to the public.
Please bring a lunch
and join us.



Authors @ Gorgas sponsored by the Alabama Center for the Book and The University of Alabama Press featured Lila Quintero Weaver in February. Weaver spoke about her latest book, **Darkroom: A Memoir in Black and White**. L-R: Curtis Clark, director, University of Alabama Press; Lila Quintero Weaver, author; and J. D. Wilson, director of sales and marketing, UA Press