

Health Matters

AI tool helps optimise antibody medicines

Antibody treatments may be able to activate the immune system to fight diseases like Parkinson's, Alzheimer's and colorectal cancer, but they are less effective when they bind with themselves and other molecules that aren't markers of disease.

Now, new machine-learning algorithms developed at the University of Michigan can highlight problem areas in antibodies that make them prone to binding non-target molecules.

"We can use the models to pinpoint the positions in antibodies that are causing trouble and change those

positions to correct the problem without causing new ones," said Peter Tessier, the Albert M. Mattocks professor of pharmaceutical sciences at U-M and corresponding author of a study.

"The models are useful because they can be used on existing antibodies, brand new antibodies in development, and even antibodies that haven't been made yet."

Antibodies fight disease by binding specific molecules called antigens on disease-causing agents -- such as the spike protein on the virus that causes COVID-19. Once bound, the antibody either directly inactivates the harmful viruses or cells



or signals the body's immune cells to do so. Unfortunately, antibodies designed to bind their specific antigens very strongly and quickly can also bind non-antigen molecules, which removes the antibodies before they target a disease. Such antibodies are also prone

to binding with other antibodies of the same type and, in the process, forming thick solutions that don't flow easily through the needles that deliver antibody drugs.

"The ideal antibodies should do three things at once: bind tightly to what they're supposed to, repel each other and ignore other things in the body," Tessier said.

An antibody that doesn't check all three boxes is unlikely to become a successful drug, but many clinical-stage antibodies can't. In their new study, Tessier's team measured the activity of 80 clinical-stage antibodies in the lab and found that 75% of the

antibodies interacted with the wrong molecules, to one another, or both. Changing the amino acids that comprise an antibody, and in turn the antibody's 3D structure, could prevent antibodies from misbehaving because an antibody's structure determines what it can bind. But, some changes could cause more problems than they fix, and the average antibody has hundreds of different amino acid positions that could be changed.

"Exploring all the changes for a single antibody takes about two workdays with our models, which is substantially shorter compared to experimentally measuring

each modified antibody -- which would take months, at best," said Emily Makowski, a recent PhD graduate in pharmaceutical sciences and the study's first author.

The team's models, which are trained on the experimental data they collected from clinical-stage antibodies, can identify how to change antibodies so they check all three boxes with 78 per cent to 88 per cent accuracy. This narrows down the number of antibody changes that chemical and biomedical engineers need to manufacture and test in the lab.

Can you die from a stroke?

V.V.S.Manian

Stroke can result in death, particularly if a person does not receive care quickly. People can learn about the potential signs of stroke, which can include facial drooping, weakness in the arm, and slurred speech. A stroke is not always fatal. Even when it is not, stroke can lead to short- and long-term disability. Stroke may also cause a decrease in life expectancy.

A person should call an ambulance immediately if they notice someone having any signs of a stroke. The ambulance crew can start treatment and help diagnose the stroke on the way to the hospital, which can help the person get crucial, early care that can improve their outcome.



What is a stroke?

Stroke is a type of cardiovascular disease. It occurs when blood flow to the brain stops. When blood cannot reach the brain, the cells start to die off within minutes. Left untreated, it can lead to permanent disability or death. Treatment typically focuses on restoring blood flow to the brain. Once blood flow is restored, a person often undergoes physical or occupational therapy to help regain any lost function.

The following factors can decrease the odds of survival or recovery from stroke:

- Advanced age: Age is one of the most significant factors in a person's outlook and recovery from a stroke. Many older stroke survivors experience mild to severe disability.
- Sex: Females may be more likely to experience disability and find it difficult to achieve full independence following a stroke than males.
- Socioeconomic status: People from lower income households may lack healthcare insurance. They may find it more difficult to access aftercare services following a stroke.

Other factors that may affect a person's outlook following a stroke but require further research include:

- mistrust of the healthcare system
- lack of disease awareness
- post-stroke depression
- location of the stroke
- type of stroke
- damage from the stroke
- marital status
- caregiver support

Types of stroke

- There are two main types of stroke: ischemic and hemorrhagic. A third type, transient ischemic attack (TIA), is also known as a ministroke or warning stroke.
- Ischemic stroke is the most common type of stroke. An ischemic stroke occurs due to atherosclerosis, which causes fatty deposits and a buildup of cholesterol plaque in the blood vessels. An artery blockage in the brain is the underlying cause of ischemic stroke. This may be due to plaque buildup or a blood clot.

Another possible cause is chronic, long-term inflammation from an underlying autoimmune disorder. Inflammation may lead to blood vessel damage, resulting in reduced blood flow to the brain. However, this is still not well understood. More research is needed.

Hemorrhagic

Doctors may also use the term "intracranial hemorrhage" when talking about hemorrhagic stroke. The bleeding in the brain puts pressure on surrounding brain cells and can cause areas of the brain to be deprived of blood. This leads to brain tissue damage, which can lead to neurologic symptoms and be life threatening. A hemorrhagic stroke occurs when an artery in or above the brain bursts, causing internal bleeding. Pressure builds up around the brain, damaging the cells.

There are two subtypes:

- intracranial hemorrhage, which is bleeding in the skull
 - subarachnoid hemorrhage, which is bleeding between the brain and the surrounding membrane
- Transient ischemic attack (TIA)
- TIA is a temporary blockage of blood flow in the brain. The clot usually dissolves on its own or gets dislodged, and the symptoms last only less than five minutes. It is a mini-stroke or warning stroke, signaling a possible full-blown stroke ahead. A stroke during sleep can delay emergency treatment.

What are the signs of a stroke?

The signs of stroke often include the sudden onset of the following symptoms:

- confusion
 - numbness in the arm, leg, or face, often on one side of the body
 - trouble seeing in one or both eyes
 - severe headache
 - trouble walking, dizziness, loss of balance, or poor coordination
- A person should call emergency services immediately if he feels that he has symptoms of a stroke.
- The CDC recommends remembering FA ST, which stands for:
- Face: Weakness or numbness in the face is present if asked to smile.
 - Arms: When asked to raise arms above the head, one or both arms start to drift downward.
 - Speech: When asked to say something, a person slurs their words or makes other changes in how they pronounce or say words.
- Can strokes be prevented?
- A person can take steps to prevent a stroke or future strokes. Prevention can include medications, other therapies, and lifestyle changes.

Some prevention tips:

- Eat more whole grains, lean proteins, fruits, vegetables, and healthy fats.
- Limit or avoid processed foods, added sugars, high salt intake, and red meats.
- Maintain a moderate weight.
- Get regular exercise or physical activity.
- Limit or avoid alcohol use.
- Stop or avoid smoking.
- Take medications as prescribed to treat any underlying conditions, including high blood pressure, cholesterol, or diabetes. (Source: National Center for Chronic Disease Prevention and Health/mnt/anfs)

Maxivision to provide 2,000 jobs across TN



Hyderabad-based Maxivision Super Speciality Eye Hospitals, one of India's leading and fastest-growing chain of private eye care hospitals, signed a memorandum of understanding with the Government of Tamil Nadu recently to set up eye hospitals across the state under the project 'Velicham'.

In a release, Dr. G.S.K. Velu, promoter and chairman of Maxivision Super Speciality Eye Hospitals, said, "As an immediate plan of action, Maxivision plans to open 20 to 30 comprehensive eye hospitals and 100 plus vision centres to cater to the increasing needs for high quality, standardised eye care services across Tamil Nadu in the next two years."

Through this MoU we will invest Rs. 400 crore and employ over 2,000 people in state of Tamil Nadu within the next three to four years. This collaboration with the Government of Tamil Nadu represents a significant milestone in our mission to make the latest technique and technology available at affordable cost to the larger section of the community he added.

Cataract is the leading cause of blindness in Tamil Nadu, accounting for about 82 per cent of all the cases among different causes. Glaucoma, Diabetic Retinopathy and other causes comprise six per cent each as the cause of blindness as per the Tamil Nadu Rapid Assessment of Avoidable Blindness and Diabetic Retinopathy survey. With an objective to cater primary eye care to large underserved

people, in deep rural pockets of the state, the government launched the project under the Public Private Partnership model with Maxivision Super Speciality Eye Hospitals.

Founded in 1996, Maxivision operates 42 centres in six states across South and West India, with a leadership position in Andhra Pradesh and Telangana. The company offers a full suite of eye care services, including cataract surgery, LASIK and ReLEx Smile treatments, treatments for retinal issues and glaucoma, ophthalmology, as well as neonatal and paediatric eye care.

Maxivision director Sudheer said: "We are excited about the opportunities this partnership presents to enhance eye care services and make a positive impact on the health and lives of the people of Tamil Nadu. We look forward to the successful execution of this initiative and to setting new benchmarks in eye care excellence. As part of its CSR initiative, Maxivision will cater to the community Ophthalmology needs and prevention of blindness initiatives in tier 3 and tier 4 towns and villages in close cooperation with Government of Tamil Nadu. With this we are planning to reach out to 12 lakh patients

in the first year of our operations".

Dr. Shibu Varkey, said, "Maxivision will be launching its comprehensive state of the art eye hospitals across the State covering 12 cities - Trichy, Salem, Tanjore, Perambalur, Kumbakonam, Erode, Madurai, Tuticorin, Tirunelveli, Nagercoil, Coimbatore, Chennai with 15 super specialty eye hospitals and 20 Vision centres in rural areas connected by tele ophthalmology in next

six months. In line with its vision of providing quality eyecare at affordable costs, by deploying the best in class technologies & highly skilled ophthalmologists and paramedical professionals, over the past 27 years, Maxivision will commence its operations in Tamil Nadu to become one of the most reliable eye care provider in the State.

Additionally, through our eye care network, we will provide job oriented medical education, training and research & development, said Dr. Shibu. We will also start two phaco training centres and fellowships in Cataract and Retina in Tamil Nadu to train young surgeons on advanced surgical techniques, Dr Shibu added.

Kotak Mahindra Bank Limited Online E - Auction
 Registered Office: 27 Bldg, C-27, G-block, Bandra Kurla Complex, Bandra (W), Mumbai, Maharashtra, Pin Code-400051 | Branch Office: No. 188, 2nd Floor, Vennar Road, Anna Salai, Chennai - 600005

SALE NOTICE FOR SALE OF IMMEDIATE ASSETS UNDER THE SECURITISATION AND RECONSTRUCTION OF FINANCIAL ASSETS AND ENFORCEMENT OF SECURITY INTEREST ACT, 2002 (Under Rule 15) Read With Notice To Bidder #11/21 The Security Interest Enforcement Notice # 15/2023/2023. The Possession Of The Public In General And In Particular To The Borrower (s) And Guarantor (s) That The Below Described Immovable Property Mortgage Charged To The Secured Creditor (s) And The Property Of Which Has Been Taken By The Authorized Officer Of Fullerton India Home Finance Company Limited (hereinafter referred to as "FHFC") On 12.09.2022, Pursuant To The Assignment Of Debt In Full Of Secured Creditor From The Secured Creditor To The Secured Creditor, as is hereinafter mentioned as "What Is What", And "Whatever There Is" Basis On 12-09-2022 Between 12:00 PM To 1:00 PM With Unlimited Extension Of Time. For Recovery Of Rs. 50,45,581/- Rupees Fifty Lakh Four Thousand Five Hundred Eighty One Only As of 12-09-2023 Along With Future Accrued Interest Till Realization. Under The Loan Account No. 60369721047648, Due To The Kotak Mahindra Bank Ltd. Secured Creditor From The Secured Creditor, M/s. Trigraha 1 & 2, M/s. Kumaran Timber And Furnitures Mart Through Its Proprietor Mr. Neelakandan C. The Reserve Price Will Be: 2,30,000/- Rupees Two Lakh Thirty Thousand Only) & Last Date For Submission Of Bid With KYC is 11-10-2023 Up To 06:00 PM. (As of)

Property Description: 1. The Plot And Part Of The Second Floor Flat No. C3, Having Super Built Up Area Of 982 Sq. Ft. (Including Common Area) Situated On The Second Floor Of Building Namely: Sea Apartments, Having 315 Sq. Ft. Undivided Share Of Land Measuring To An Extent Of 2925 Sq. Ft. Bearing Plot No. 14, Ambalambadi Street, Venkateshwara Nagar, Puzhichalur, Chennai - 600074. Computed to Survey No. 1091/ And 1143/ As Per Patta New Survey Nos. 1091/ & 1143/ Sub. To M. 646 Puzhichalur Village Andur Taluk, Kancheepuram District. Boundaries North- 40 Feet Road (Ambalambadi Street), East - 24 Feet Road, South - 15 Feet Road, West - 15 Feet Road, Measuring On The North Side: 45 Feet, East Side: 62 Feet, Southern Side: 45 Feet, Western Side - 48 Feet

In All Addressing an Extent Of 2925 Sq. Ft. Situated Within In The Sub-Registration District Of Chennai South Sub-Registration District Of Chennai. The Borrower's Attention Is Invited To The Provisions Of Sub-Section 8 Of Section 13, Of The Act, In Respect Of The Time Available, To Redeem The Secured Asset. Public In General And Borrowers In Particular: Please Take Notice That In Case Auction Scheduled Herein Falls For Any Reason Whatever The Secured Creditor May Enforce Security Interest By Way Of Sale Through Private Treaty. In Case Of Any Clarification/Requirement Regarding Assets Under Sale, Bidder May Contact To Mr. Vishal Adishesan (91 944 916 009), Mr. Rajender Dahiya (91 944 264 915). For Detailed Terms And Conditions Of The Sale, Please Refer To The URL: <https://www.kotak.com/and/or/auctions.html> Provided In Kotak Mahindra Bank Website. | www.kotak.com/and/or/ <https://www.kotak.com/and/or/auctions.html>

Place: Chennai. Date: 14.09.23

homefirst Home First Finance Company India Limited
 CIN: L65990MH2010PLC240703,
 Website: homefirstindia.com Phone No.: 18003008425 Email ID: loanfirst@homefirstindia.com

NOTICE OF SALE THROUGH PRIVATE TREATY
 Sale of Secured assets under Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002. (Notice Under Rule 8 (b))

The undersigned as Authorized Officer of Home First Finance Company India Limited (Home First) has taken over possession of the schedules property, in terms of section 13(4) of the subject act in connection with outstanding dues payable by you to us. Please refer our Notice dated mentioned below, where we informed that we have published Auction Notice in the newspaper mentioned by the Reserve Price as mentioned. The Auction was scheduled on the date as mentioned. The Auction could not be successful due to lack of any bidder.

Public at large is informed that the secured property(ies) as mentioned in the Schedule are available for sale through Private Treaty, as per the terms agreeable to the Company for realisation of Company's dues on "AS IS WHERE IS BASIS" and "AS IS WHAT IS BASIS".

Hence, in terms of the provisions of the subject Act and Rules made thereunder, we issue this notice to you to enable you to discharge the amount due to the Company within 15 days from the date of this notice and take back the assets mentioned in the schedule, failing which the assets will be sold to discharge the liabilities. This is without prejudice to any other rights available to the Company under the subject Act or any other law in force.

The interested parties may contact the Authorized Officer for further details/clarifications and for submitting their offers. Sale shall be in accordance with the provisions of SARFAESI Act, Rules.

S. No.	Name of the Account/ Guarantors	Details of property/ owner of the property	Outstanding amount as on Demand Notice (in INR)	Date of Sale Notice	Newspaper	Date of e-Auction	Reserve Price (in INR)	No of Authorised Officer
1.	Mahalakshmi V. Veludurai K. Shanmugasree V. Maharaja V.	Flat No. 8, Block 496/14G, bearing Plot No. 8, Computed S.No. 496/14G, New S.No. 496/14F Measuring with to an extent of 803 Sq Ft., Situated at Sri Sai Thiruvani Nagar, No. 14 Palamthokulam Village, Avadi Taluk, Thiruvallur District, Tiruvallur, Tamil Nadu, 600092	6,64,285	13-08-2023	Trinity Mirror + Makkal Kural (English-Tamil)	13-09-2023	9,63,800	755025138

STATUTORY 15 DAYS SALE NOTICE UNDER THE SARFAESI ACT, 2002

The borrower/guarantors are hereby notified to pay the sum as mentioned in the demand notice along with upto date interest and ancillary expenses before 15 days from the date of this notice, failing which the property will be auctioned/ sold and balance dues, if any, will be recovered with interest and cost.

Date: 14/09/2023
 Place: Chennai

Signed by Authorized Officer,
 Home First Finance Company India Limited