

The Lord is like a strong tower, where the righteous can go and be safe.

Proverbs 18:10

# DIYARYO KABITENYO

Nagmamalasakit sa Ialawigan

Entered as FIRST CLASS MAIL at Manila Post Office with Business Mail Permit No. 82-19 66-149  
Vol. 23 No. 41 November 30-December 6, 2020 P 10.00

Be alert, stand firm in the faith, be brave, be strong.

1 Corinthians 16:13

## SM Foundation builds new school building in Tanza

As part of their initiative to make education more accessible to grammar communities, SM Foundation (SMF) constructed a new school building in Tanza, Cavite last Nov. 20. This project is part of the Foundation's School Building Program, a second grand project in line with DepEd's Adopt-a-school program that aims to provide quality public education for Filipinos.

The new school building, a fully furnished two-story four-classroom building, will be utilized by the Grade 2 students of Santa Elementary School, who previously used a converted store as their classroom. With the opening of this new

building, principal Dr. Gloria Castano hopes to improve their current students to classroom ratio of 50:1.

"We are overwhelmed and thankful to SM Foundation and SM Prime for continuing with the project despite the COVID-19 pandemic. This school building will serve as a haven in nurturing the young minds of our Peninsula learners," Castano said.

The building will officially hold classes as when the threat of COVID-19 has subsided. For now, Santa will be employing a blend of learning style until things normalize, such as the SMF's adopt-a-school. The facility also caters to the stu-



dents' other needs such as mental and physical well-being, with a library, guidance and counseling room, and a clinic in place to help students thrive holistically.

The clinic also has an isolation room where pupils can be given first aid treatment or be isolated at the onset of early symptoms of illness during



Singapore Ambassador Gerard Ho hands over the check to Mayor Dinesh Kumar Chao for being awarded as Man of the Year in Public Service in Asia Leaders Awards 2020, last Nov. 20 at Shangri-La Hotel in Makati City.

Turn to page 7

# DIYARYO KABITENYO

ISSN: 2644-811X  
ARNULFO BARCO  
Publisher - Editor  
GENIE BARCO  
Operations Manager

DIYARYO KABITENYO is published weekly and processed through the process of Carlin. It has its editorial and business offices at Block 13 Lot 1 Umaymay Homes Subdivision, Anabao, C. City of Iloilo, Cavite. It is registered at the Department of Trade and Industry Region 4, P.O. Box No. 92334. Our telephone number is 0917948899.

Subscription Rates: 1 month - P. 40.00 2 months - 70.00 3 months - 100.00 6 months - 180.00  
Advertising Rates: Domestic - P300.00/col. cm. Legal - 100.00/col. cm.



Publishers Association of the Philippines, Inc.

## Early, late stages of degenerative diseases are distinct

Rice University biochemists Michael Stern and James McNew have studied how neurodegeneration kills cells. They've conducted countless experiments over more than a decade, and they've summarized all they've learned in a simple diagram they hope may change how doctors perceive and treat degenerative diseases as varied as Alzheimer's, Parkinson's and muscle atrophy.

In a study published this month in *Molecular Psychiatry*, the researchers describe how the two phases of degeneration represent distinct entities, with distinct alterations in signaling pathways that have distinct effects on disease pathology, McNew and Stern propose that degeneration, at the cellular level, occurs in two distinct phases that are marked by very different activities of protein signaling pathways that regulate basic cell functions.

"We would like clinicians and other researchers to understand that the two phases of degeneration represent distinct entities, with distinct alterations in signaling pathways that have distinct effects on disease pathology," Stern said. "In the first phase before other words, we think that patients need to be treated differently depending on which phase they are in."

Stern and McNew's diagram shows how the activity of key cell signaling proteins either increases or decreases at the onset of degeneration, ultimately bringing about oxidative stress. Oxidative stress then brings about the second phase of the condition, during which degeneration occurs, where the signaling proteins implicated in

the first phase behave in a completely different way. Because cells behave quite differently in the two phases, the research suggests patients in different phases of a disease may respond differently to the same treatment.

"The two phases of degeneration haven't been previously recognized, so it hasn't been understood, clinically, that you have two different populations of patients," McNew said.

building PWD friendly and emergency ready, some of the equipment and furniture used were also crafted by the PWD community as well. To achieve this, SMFI collaborated with the members of the Foundation of These Able Persons, a

community focused on empowering PWDs, to make the teacher's desk sets and student stretchers. Through this partnership, SMFI is able to provide our PWDs with an avenue where they can be economically independent and contribute so

community focused on empowering PWDs, to make the teacher's desk sets and student stretchers. Through this partnership, SMFI is able to provide our PWDs with an avenue where they can be economically independent and contribute so

community focused on empowering PWDs, to make the teacher's desk sets and student stretchers. Through this partnership, SMFI is able to provide our PWDs with an avenue where they can be economically independent and contribute so

community focused on empowering PWDs, to make the teacher's desk sets and student stretchers. Through this partnership, SMFI is able to provide our PWDs with an avenue where they can be economically independent and contribute so

community focused on empowering PWDs, to make the teacher's desk sets and student stretchers. Through this partnership, SMFI is able to provide our PWDs with an avenue where they can be economically independent and contribute so

### (SM... from page 1)

with a 10-foot hand washing area to promote handwashing in the community. With such a feature, SMFI aims to spread the culture of good hygiene and prevent the spread of harmful viruses and diseases.

Even before the first bricks were laid down on the school, SMFI has already implemented strict safety procedure to ensure everyone's safety. According to SMFI during an interview, they ensured that everyone involved before, during, and after the construction of the building followed

strict safety protocols. "Before construction, we ensured that our contractors adhere to occupational health and safety requirements as mandated by DOLE. We also ensure that the contractors and workers for any construction project of SMFI are tested for COVID-19," SMFI further shared. "Together with our local SM Employer Volunteers, we continuously check if our contractors follow the standard occupational health and safety standards set by DOLE."

Other than providing children from smaller income families stand up to us with children with better means, SMFI also used the construction of the building to empower the Persons with Disabilities (PWD) community. Not only is the

building PWD friendly and emergency ready, some of the equipment and furniture used were also crafted by the PWD community as well. To achieve this, SMFI collaborated with the members of the Foundation of These Able Persons, a community focused on empowering PWDs, to make the teacher's desk sets and student stretchers. Through this partnership, SMFI is able to provide our PWDs with an avenue where they can be economically independent and contribute so

community focused on empowering PWDs, to make the teacher's desk sets and student stretchers. Through this partnership, SMFI is able to provide our PWDs with an avenue where they can be economically independent and contribute so

community focused on empowering PWDs, to make the teacher's desk sets and student stretchers. Through this partnership, SMFI is able to provide our PWDs with an avenue where they can be economically independent and contribute so

REPUBLIC OF THE PHILIPPINES  
FOURTH JUDICIAL REGION  
REGIONAL TRIAL COURT  
BASMARINAS CITY, PROVINCE OF CAVITE  
NATIONAL HOME MORTGAGE  
FINANCE CORPORATION (NHMFC),  
Petitioner/Mortgagee,

File No. FT-DC-0566-19  
EXTRA JUDICIAL FORECLOSURE  
OF REAL ESTATE MORTGAGE  
UNDER ACT 3115, AS AMENDED  
BY ACT 4114

CARMENCITA S. PATAO, sued to by  
PETRONILO D. PATAO,  
Respondent/Mortgagor,

**NOTICE OF SHERIFF'S SALE**

Upon every judicial process for sale under Act 3115, as amended by Act 4114 filed by petitioner mortgagee, NATIONAL HOME MORTGAGE FINANCE CORPORATION (NHMFC), a petitioner named and controlled corporation created under PD No. 1297, with postal address at 106 Amorsolo St., Legaspi Village, Makati City against the respondent/mortgagor, CARMENCITA S. PATAO, sued to by PETRONILO D. PATAO, with postal address at Block 47 Lot 4 Phase III City Homes - Dasmariñas, Reg. Rural, Dasmariñas City, Province of Cavite under No. 139-19-77-0000, 7<sup>th</sup> Avenue, Calamba City and for the satisfaction of the mortgage debt which as of May 22, 2019 amounts to EIGHT HUNDRED ONE THOUSAND ONE HUNDRED EIGHTY TWO PESOS & 50/100 (P8,182.82), exclusive of all legal fees and expenses incurred in the foreclosure and sale, the undersigned Sheriff will sell at public auction on **January 06, 2021** at 10:00 o'clock in the morning or soon thereafter in the Court Room of Branch 96, Regional Trial Court, General Trial, Dasmariñas Community Affairs (DACA) Building, Congressional Road, Branch 1, Dasmariñas City, Province of Cavite to the highest bidder and for CASH as CERTIFIED CHECK, at Philippine Currency, the following described real property together with all the buildings and other improvements existing thereon, to-wit:

**Tranche Certificate of Title No. T-046127**

IT IS HEREBY CERTIFIED that certain land situated in the Municipality of Dasmariñas, Prov. of Cavite is bounded and described as follows:  
A parcel of land (Lot 6, Blk. 47) of the subdivision, plan P-04-070000, being a portion of C-10, from Estate L.R.C. Rice, Inc., 1 situated in the Reg. Subdiv. Map of Dasmariñas, Prov. of Cavite, bounded on the NW, along line 1-2 by Lot 7, on the SE, along line 2-3 by Lot 10, both lots 47' on the SW, along line 3-4 by Blk. 22-4 on the SW, along line 4-5 by 944.90 sq. m. of the said plan. Beginning at a pt. marked "A" on plan being N. 34 deg. 20' 30" E. 360.00 m. from Point 15, Iron Station, Station E. 75 deg. 47' E. 1.60 m. to pt. 2; Station 3, 11 deg. 17' N. 6.50 m. to pt. 3; N. 74 deg. 47' N. 4.00 m. to pt. 4; Station 5, 11 deg. 17' N. 4.50 m. to pt. 5; on the NE, along line 5-6 by 1,168.00 sq. m. of the said plan, surveyed as per indicated on the plan and as marked on the ground by 80 cm. iron, wood, Chalk pins, hardware etc., date of original survey, July 27, 1985 (date 1), 1988 and that of the said survey, Sept. 10, 1991, date 2), 1992 and was approved on Feb. 25, 1992.

It is registered in accordance with the provisions of the Property Registration Decree in the name of "CARMENCITA S. PATAO, sued to by PETRONILO D. PATAO, both of legal age, Filipinos."  
Proprietor's Rights and/or Incidents are hereby required to mortgagee for Dasmariñas for title of the said real property and improvements thereon, if there be any.

All needed data must be submitted to the undersigned on the above stated time and date.  
In the event the publication herein should not take place on the said date and time, it shall be held on **January 13, 2021**, at the same time and place without further notice.  
19 January 2020, Dasmariñas City, Province of Cavite.

(Sgd.) ALVARO B. MELABER  
Sheriff  
(Sgd.) MARIELA LEITE BAYRAN  
Clk of Court & 1st-Office Sheriff

Case Number:  
NATIONAL HOME MORTGAGE FINANCE CORPORATION (NHMFC)  
106 Amorsolo St., Legaspi Village, Makati City  
CARMENCITA S. PATAO, sued to by PETRONILO D. PATAO  
Block 47 Lot 4 Phase III City Homes - Dasmariñas  
Reg. Rural, Dasmariñas City, Province of Cavite  
and/or  
No. 139-19-77-0000, 7<sup>th</sup> Avenue, Calamba City  
Process pending at:  
1. The Justice Branch of Regional Trial Court, Dasmariñas City, Cavite  
2. The Justice Branch of Dasmariñas City Hall  
3. The Justice Branch of Dasmariñas City, Reg. Office  
4. The Justice Branch of Dasmariñas City Public Market  
Publication: 05/01/2020-10/29/2020  
Date: November 19, 2020 at 10:00 AM

REPUBLIC OF THE PHILIPPINES  
FOURTH JUDICIAL REGION  
REGIONAL TRIAL COURT  
BASMARINAS CITY, CAVITE  
NATIONAL HOME MORTGAGE  
FINANCE CORPORATION (NHMFC),  
Petitioner/Mortgagee,

File No. FT-DC-0526-19  
EXTRA JUDICIAL FORECLOSURE  
OF REAL ESTATE MORTGAGE  
UNDER ACT 3115, AS AMENDED  
BY ACT 4114

LEONCIO N. JAYA, sued to by  
LEONIDA T. JAYA,  
Respondent/Mortgagor,

**NOTICE OF SHERIFF'S SALE**

Upon every judicial process for sale under Act 3115, as amended by Act 4114 filed by petitioner mortgagee, NATIONAL HOME MORTGAGE FINANCE CORPORATION (NHMFC), a petitioner named and controlled corporation created under PD No. 1297, with postal address at 106 Amorsolo St., Legaspi Village, Makati City against the respondent/mortgagor, LEONCIO N. JAYA, sued to by LEONIDA T. JAYA, with postal address at Street 14 Lot 9 From North Station, Reg. Subdiv. Dasmariñas City, Province of Cavite under No. 34 Benghal Street, Municipality of Los Baños, Province of Laguna and for the satisfaction of the mortgage debt which as of May 22, 2019 amounts to ONE MILLION SEVENTEEN THOUSAND TWO HUNDRED THIRTY NINE PESOS & 20/100 (P1,170,239.00), exclusive of all legal fees and expenses incurred in the foreclosure and sale, the undersigned Sheriff will sell at public auction on **January 06, 2021** at 10:00 o'clock in the morning or soon thereafter in the Court Room of Branch 96, Regional Trial Court, General Trial, Dasmariñas Community Affairs (DACA) Building, Congressional Road, Branch 1, Dasmariñas City, Province of Cavite to the highest bidder and for CASH as CERTIFIED CHECK, at Philippine Currency, the following described real property together with all the buildings and other improvements existing thereon, to-wit:

**Tranche Certificate of Title No. T-046129**

IT IS HEREBY CERTIFIED that certain land situated in the Municipality of Dasmariñas, Prov. of Cavite is bounded and described as follows:  
A parcel of land (Lot 6, Blk. 14) of subdivision, plan P-04-0700-000001, being a portion of Lot 100-C, P-04-0000, L.R.C. Rice, Inc., 1 situated in the Reg. Subdiv. Map of Dasmariñas, Prov. of Cavite, bounded on the NW, along line 1-2 by Lot 5, Blk. 14 on the NE, along line 2-3 by Lot 7 on the SE, along line 3-4 by Lot 7, Blk. 14, 48 on the SW, along line 4-5 by Blk. 16, all of said plan. Beginning at a pt. marked "A" on plan being N. 5 deg. 37' N. 662.00 m. from Point 15, Iron Station, Station N. 74 deg. 30' E. 4.00 m. to pt. 2; Station 3, 10 deg. 20' N. 7.00 m. to pt. 3; N. 74 deg. 47' N. 4.00 m. to pt. 4; Station 5, 11 deg. 17' N. 4.50 m. to pt. 5; on the NE, along line 5-6 by 1,168.00 sq. m. of the said plan, surveyed as per indicated on the plan and as marked on the ground by 80 cm. iron, wood, Chalk pins, hardware etc., date of original survey, July 27, 1985 (date 1), 1988 and that of the said survey, Sept. 10, 1991, date 2), 1992 and was approved on Feb. 25, 1992.

It is registered in accordance with the provisions of the Property Registration Decree in the name of "LEONCIO N. JAYA, sued to by LEONIDA T. JAYA, both of legal age, Filipinos."  
Proprietor's Rights and/or Incidents are hereby required to mortgagee for Dasmariñas for title of the said real property and its improvements thereon, if there be any.

All needed data must be submitted to the undersigned on the above stated time and date.  
In the event the publication herein should not take place on the said date and time, it shall be held on **January 13, 2021**, at the same time and place without further notice.  
19 June 2020, Dasmariñas City, Province of Cavite.

(Sgd.) ALVARO B. MELABER  
Sheriff  
(Sgd.) MARIELA LEITE BAYRAN  
Clk of Court & 1st-Office Sheriff

Case Number:  
NATIONAL HOME MORTGAGE FINANCE CORPORATION (NHMFC)  
106 Amorsolo St., Legaspi Village, Makati City  
LEONCIO N. JAYA, sued to by LEONIDA T. JAYA  
Street 14 Lot 9 From North Station  
Reg. Subdiv. Dasmariñas City, Province of Cavite  
and/or  
No. 34 Benghal Street, Municipality of Los Baños, Province of Laguna  
Process pending at:  
1. The Justice Branch of Regional Trial Court, Dasmariñas City, Cavite  
2. The Justice Branch of Dasmariñas City Hall  
3. The Justice Branch of Dasmariñas City, Reg. Office  
4. The Justice Branch of Dasmariñas City Public Market  
Publication: 05/01/2020-10/29/2020  
Date: November 19, 2020 at 10:00 AM

REPUBLIC OF THE PHILIPPINES  
FOURTH JUDICIAL REGION  
REGIONAL TRIAL COURT  
DASMARINAS CITY, CAVITE

NATIONAL HOME MORTGAGE  
FINANCE CORPORATION (NHMFCA)  
Pioneer Mortgages

File No. FC-DC-4998-20  
EXTRA JUDICIAL FORECLOSURE  
OF REAL ESTATE MORTGAGE  
UNDER ACT 3131, AS AMENDED  
BY ACT 4314

Sps. TORIBIO F. MALATE  
and CARMEN S. MALATE,  
Respondents/Mortgagors.

**NOTICE OF SHERIFF'S SALE**

Upon extrajudicial petition for sale under Act 3131, as amended by Act 4314 filed by petitioner  
mortgagor, NATIONAL HOME MORTGAGE FINANCE CORPORATION (NHMFCA), a  
government owned and controlled corporation created under P.D. No. 1267, with postal address at 316  
Mano-Mano St., Laguna Village, Makati City against the respondent mortgagors, Sps. TORIBIO F.  
MALATE and CARMEN S. MALATE, with postal address at Block 4 Lot 3356A (see Annex 2),  
Daga, Talavera, Dasmariñas City, Province of Cavite and 30/60, T. Katarawan, Bataan, Bataan Prov. and  
Imus City, Province of Cavite and for the satisfaction of the mortgaged debt which as of September  
30, 2019 amounts to FOUR HUNDRED EIGHTY SEVEN THOUSAND EIGHT HUNDRED  
ELEVEN PESOS & 34/100 (Php 487,811.36), exclusive of all legal fees and expenses incurred  
in this foreclosure and sale, the undersigned Sheriff will sell at public auction on **January 06, 2021**  
at 10:00 o'clock in the morning or soon thereafter at the Court Room of Branch 93, Regional Trial  
Court, Circuit 1, Division Office, Commonwealth Avenue (DASO) Building, Congressional Road,  
Barang 1, Dasmariñas City, Province of Cavite to the highest bidder and for CASH or CERTIFIED  
CHECK, in Philippine Currency, the following described real property together with all the buildings  
and other improvements existing thereon, to-wit:

**Transfer Certificate of Title No. T-44999**

IT IS HEREBY CERTIFIED that certain land situated in the Municipality of Dasmariñas, Province  
of Cavite, bounded and described as follows:

A portion of land (Lot 11, Blk. 4) of the above titled plan, File No. 48788-0000101, being a portion  
of the same, off Lot 1170 & 1171, P.O. 1980, T.R.C. 96, Vol. 2, situated in the Block of Lot 11, Block  
4, Dasmariñas City, Province of Cavite. Bounded to the SW, along line 1-2 to Lot 14, Blk. 4, in  
the SW, along line 2-3 to Lot 11, Blk. 4 in the NE, along line 3-4 by 431/2' to the SE, along  
line 4-1 to Lot 11, Blk. 4, all of the same, with 1/400' beginning at a point marked "1" on said plan,  
2. 34' along NE, 100' 60" to, from Mark. 11A, along E-line, 100' 60" to, from Mark. 11B, 4'00" to, to  
to 3. 100' 60" to, along SW, 4'00" to, to 4. 100' 60" to, to 5. 100' 60" to, to 6. 100' 60" to, to 7.  
4'00" to, to 8. 4'00" to, to 9. 4'00" to, to 10. 4'00" to, to 11. 4'00" to, to 12. 4'00" to, to 13. 4'00" to, to 14.  
4'00" to, to 15. 4'00" to, to 16. 4'00" to, to 17. 4'00" to, to 18. 4'00" to, to 19. 4'00" to, to 20. 4'00" to, to 21.  
4'00" to, to 22. 4'00" to, to 23. 4'00" to, to 24. 4'00" to, to 25. 4'00" to, to 26. 4'00" to, to 27. 4'00" to, to 28.  
4'00" to, to 29. 4'00" to, to 30. 4'00" to, to 31. 4'00" to, to 32. 4'00" to, to 33. 4'00" to, to 34. 4'00" to, to 35.  
4'00" to, to 36. 4'00" to, to 37. 4'00" to, to 38. 4'00" to, to 39. 4'00" to, to 40. 4'00" to, to 41. 4'00" to, to 42.  
4'00" to, to 43. 4'00" to, to 44. 4'00" to, to 45. 4'00" to, to 46. 4'00" to, to 47. 4'00" to, to 48. 4'00" to, to 49.  
4'00" to, to 50. 4'00" to, to 51. 4'00" to, to 52. 4'00" to, to 53. 4'00" to, to 54. 4'00" to, to 55. 4'00" to, to 56.  
4'00" to, to 57. 4'00" to, to 58. 4'00" to, to 59. 4'00" to, to 60. 4'00" to, to 61. 4'00" to, to 62. 4'00" to, to 63.  
4'00" to, to 64. 4'00" to, to 65. 4'00" to, to 66. 4'00" to, to 67. 4'00" to, to 68. 4'00" to, to 69. 4'00" to, to 70.  
4'00" to, to 71. 4'00" to, to 72. 4'00" to, to 73. 4'00" to, to 74. 4'00" to, to 75. 4'00" to, to 76. 4'00" to, to 77.  
4'00" to, to 78. 4'00" to, to 79. 4'00" to, to 80. 4'00" to, to 81. 4'00" to, to 82. 4'00" to, to 83. 4'00" to, to 84.  
4'00" to, to 85. 4'00" to, to 86. 4'00" to, to 87. 4'00" to, to 88. 4'00" to, to 89. 4'00" to, to 90. 4'00" to, to 91.  
4'00" to, to 92. 4'00" to, to 93. 4'00" to, to 94. 4'00" to, to 95. 4'00" to, to 96. 4'00" to, to 97. 4'00" to, to 98.  
4'00" to, to 99. 4'00" to, to 100. 4'00" to, to 101. 4'00" to, to 102. 4'00" to, to 103. 4'00" to, to 104. 4'00" to, to 105.  
4'00" to, to 106. 4'00" to, to 107. 4'00" to, to 108. 4'00" to, to 109. 4'00" to, to 110. 4'00" to, to 111. 4'00" to, to 112.  
4'00" to, to 113. 4'00" to, to 114. 4'00" to, to 115. 4'00" to, to 116. 4'00" to, to 117. 4'00" to, to 118. 4'00" to, to 119.  
4'00" to, to 120. 4'00" to, to 121. 4'00" to, to 122. 4'00" to, to 123. 4'00" to, to 124. 4'00" to, to 125. 4'00" to, to 126.  
4'00" to, to 127. 4'00" to, to 128. 4'00" to, to 129. 4'00" to, to 130. 4'00" to, to 131. 4'00" to, to 132. 4'00" to, to 133.  
4'00" to, to 134. 4'00" to, to 135. 4'00" to, to 136. 4'00" to, to 137. 4'00" to, to 138. 4'00" to, to 139. 4'00" to, to 140.  
4'00" to, to 141. 4'00" to, to 142. 4'00" to, to 143. 4'00" to, to 144. 4'00" to, to 145. 4'00" to, to 146. 4'00" to, to 147.  
4'00" to, to 148. 4'00" to, to 149. 4'00" to, to 150. 4'00" to, to 151. 4'00" to, to 152. 4'00" to, to 153. 4'00" to, to 154.  
4'00" to, to 155. 4'00" to, to 156. 4'00" to, to 157. 4'00" to, to 158. 4'00" to, to 159. 4'00" to, to 160. 4'00" to, to 161.  
4'00" to, to 162. 4'00" to, to 163. 4'00" to, to 164. 4'00" to, to 165. 4'00" to, to 166. 4'00" to, to 167. 4'00" to, to 168.  
4'00" to, to 169. 4'00" to, to 170. 4'00" to, to 171. 4'00" to, to 172. 4'00" to, to 173. 4'00" to, to 174. 4'00" to, to 175.  
4'00" to, to 176. 4'00" to, to 177. 4'00" to, to 178. 4'00" to, to 179. 4'00" to, to 180. 4'00" to, to 181. 4'00" to, to 182.  
4'00" to, to 183. 4'00" to, to 184. 4'00" to, to 185. 4'00" to, to 186. 4'00" to, to 187. 4'00" to, to 188. 4'00" to, to 189.  
4'00" to, to 190. 4'00" to, to 191. 4'00" to, to 192. 4'00" to, to 193. 4'00" to, to 194. 4'00" to, to 195. 4'00" to, to 196.  
4'00" to, to 197. 4'00" to, to 198. 4'00" to, to 199. 4'00" to, to 200. 4'00" to, to 201. 4'00" to, to 202. 4'00" to, to 203.  
4'00" to, to 204. 4'00" to, to 205. 4'00" to, to 206. 4'00" to, to 207. 4'00" to, to 208. 4'00" to, to 209. 4'00" to, to 210.  
4'00" to, to 211. 4'00" to, to 212. 4'00" to, to 213. 4'00" to, to 214. 4'00" to, to 215. 4'00" to, to 216. 4'00" to, to 217.  
4'00" to, to 218. 4'00" to, to 219. 4'00" to, to 220. 4'00" to, to 221. 4'00" to, to 222. 4'00" to, to 223. 4'00" to, to 224.  
4'00" to, to 225. 4'00" to, to 226. 4'00" to, to 227. 4'00" to, to 228. 4'00" to, to 229. 4'00" to, to 230. 4'00" to, to 231.  
4'00" to, to 232. 4'00" to, to 233. 4'00" to, to 234. 4'00" to, to 235. 4'00" to, to 236. 4'00" to, to 237. 4'00" to, to 238.  
4'00" to, to 239. 4'00" to, to 240. 4'00" to, to 241. 4'00" to, to 242. 4'00" to, to 243. 4'00" to, to 244. 4'00" to, to 245.  
4'00" to, to 246. 4'00" to, to 247. 4'00" to, to 248. 4'00" to, to 249. 4'00" to, to 250. 4'00" to, to 251. 4'00" to, to 252.  
4'00" to, to 253. 4'00" to, to 254. 4'00" to, to 255. 4'00" to, to 256. 4'00" to, to 257. 4'00" to, to 258. 4'00" to, to 259.  
4'00" to, to 260. 4'00" to, to 261. 4'00" to, to 262. 4'00" to, to 263. 4'00" to, to 264. 4'00" to, to 265. 4'00" to, to 266.  
4'00" to, to 267. 4'00" to, to 268. 4'00" to, to 269. 4'00" to, to 270. 4'00" to, to 271. 4'00" to, to 272. 4'00" to, to 273.  
4'00" to, to 274. 4'00" to, to 275. 4'00" to, to 276. 4'00" to, to 277. 4'00" to, to 278. 4'00" to, to 279. 4'00" to, to 280.  
4'00" to, to 281. 4'00" to, to 282. 4'00" to, to 283. 4'00" to, to 284. 4'00" to, to 285. 4'00" to, to 286. 4'00" to, to 287.  
4'00" to, to 288. 4'00" to, to 289. 4'00" to, to 290. 4'00" to, to 291. 4'00" to, to 292. 4'00" to, to 293. 4'00" to, to 294.  
4'00" to, to 295. 4'00" to, to 296. 4'00" to, to 297. 4'00" to, to 298. 4'00" to, to 299. 4'00" to, to 300. 4'00" to, to 301.  
4'00" to, to 302. 4'00" to, to 303. 4'00" to, to 304. 4'00" to, to 305. 4'00" to, to 306. 4'00" to, to 307. 4'00" to, to 308.  
4'00" to, to 309. 4'00" to, to 310. 4'00" to, to 311. 4'00" to, to 312. 4'00" to, to 313. 4'00" to, to 314. 4'00" to, to 315.  
4'00" to, to 316. 4'00" to, to 317. 4'00" to, to 318. 4'00" to, to 319. 4'00" to, to 320. 4'00" to, to 321. 4'00" to, to 322.  
4'00" to, to 323. 4'00" to, to 324. 4'00" to, to 325. 4'00" to, to 326. 4'00" to, to 327. 4'00" to, to 328. 4'00" to, to 329.  
4'00" to, to 330. 4'00" to, to 331. 4'00" to, to 332. 4'00" to, to 333. 4'00" to, to 334. 4'00" to, to 335. 4'00" to, to 336.  
4'00" to, to 337. 4'00" to, to 338. 4'00" to, to 339. 4'00" to, to 340. 4'00" to, to 341. 4'00" to, to 342. 4'00" to, to 343.  
4'00" to, to 344. 4'00" to, to 345. 4'00" to, to 346. 4'00" to, to 347. 4'00" to, to 348. 4'00" to, to 349. 4'00" to, to 350.  
4'00" to, to 351. 4'00" to, to 352. 4'00" to, to 353. 4'00" to, to 354. 4'00" to, to 355. 4'00" to, to 356. 4'00" to, to 357.  
4'00" to, to 358. 4'00" to, to 359. 4'00" to, to 360. 4'00" to, to 361. 4'00" to, to 362. 4'00" to, to 363. 4'00" to, to 364.  
4'00" to, to 365. 4'00" to, to 366. 4'00" to, to 367. 4'00" to, to 368. 4'00" to, to 369. 4'00" to, to 370. 4'00" to, to 371.  
4'00" to, to 372. 4'00" to, to 373. 4'00" to, to 374. 4'00" to, to 375. 4'00" to, to 376. 4'00" to, to 377. 4'00" to, to 378.  
4'00" to, to 379. 4'00" to, to 380. 4'00" to, to 381. 4'00" to, to 382. 4'00" to, to 383. 4'00" to, to 384. 4'00" to, to 385.  
4'00" to, to 386. 4'00" to, to 387. 4'00" to, to 388. 4'00" to, to 389. 4'00" to, to 390. 4'00" to, to 391. 4'00" to, to 392.  
4'00" to, to 393. 4'00" to, to 394. 4'00" to, to 395. 4'00" to, to 396. 4'00" to, to 397. 4'00" to, to 398. 4'00" to, to 399.  
4'00" to, to 400. 4'00" to, to 401. 4'00" to, to 402. 4'00" to, to 403. 4'00" to, to 404. 4'00" to, to 405. 4'00" to, to 406.  
4'00" to, to 407. 4'00" to, to 408. 4'00" to, to 409. 4'00" to, to 410. 4'00" to, to 411. 4'00" to, to 412. 4'00" to, to 413.  
4'00" to, to 414. 4'00" to, to 415. 4'00" to, to 416. 4'00" to, to 417. 4'00" to, to 418. 4'00" to, to 419. 4'00" to, to 420.  
4'00" to, to 421. 4'00" to, to 422. 4'00" to, to 423. 4'00" to, to 424. 4'00" to, to 425. 4'00" to, to 426. 4'00" to, to 427.  
4'00" to, to 428. 4'00" to, to 429. 4'00" to, to 430. 4'00" to, to 431. 4'00" to, to 432. 4'00" to, to 433. 4'00" to, to 434.  
4'00" to, to 435. 4'00" to, to 436. 4'00" to, to 437. 4'00" to, to 438. 4'00" to, to 439. 4'00" to, to 440. 4'00" to, to 441.  
4'00" to, to 442. 4'00" to, to 443. 4'00" to, to 444. 4'00" to, to 445. 4'00" to, to 446. 4'00" to, to 447. 4'00" to, to 448.  
4'00" to, to 449. 4'00" to, to 450. 4'00" to, to 451. 4'00" to, to 452. 4'00" to, to 453. 4'00" to, to 454. 4'00" to, to 455.  
4'00" to, to 456. 4'00" to, to 457. 4'00" to, to 458. 4'00" to, to 459. 4'00" to, to 460. 4'00" to, to 461. 4'00" to, to 462.  
4'00" to, to 463. 4'00" to, to 464. 4'00" to, to 465. 4'00" to, to 466. 4'00" to, to 467. 4'00" to, to 468. 4'00" to, to 469.  
4'00" to, to 470. 4'00" to, to 471. 4'00" to, to 472. 4'00" to, to 473. 4'00" to, to 474. 4'00" to, to 475. 4'00" to, to 476.  
4'00" to, to 477. 4'00" to, to 478. 4'00" to, to 479. 4'00" to, to 480. 4'00" to, to 481. 4'00" to, to 482. 4'00" to, to 483.  
4'00" to, to 484. 4'00" to, to 485. 4'00" to, to 486. 4'00" to, to 487. 4'00" to, to 488. 4'00" to, to 489. 4'00" to, to 490.  
4'00" to, to 491. 4'00" to, to 492. 4'00" to, to 493. 4'00" to, to 494. 4'00" to, to 495. 4'00" to, to 496. 4'00" to, to 497.  
4'00" to, to 498. 4'00" to, to 499. 4'00" to, to 500. 4'00" to, to 501. 4'00" to, to 502. 4'00" to, to 503. 4'00" to, to 504.  
4'00" to, to 505. 4'00" to, to 506. 4'00" to, to 507. 4'00" to, to 508. 4'00" to, to 509. 4'00" to, to 510. 4'00" to, to 511.  
4'00" to, to 512. 4'00" to, to 513. 4'00" to, to 514. 4'00" to, to 515. 4'00" to, to 516. 4'00" to, to 517. 4'00" to, to 518.  
4'00" to, to 519. 4'00" to, to 520. 4'00" to, to 521. 4'00" to, to 522. 4'00" to, to 523. 4'00" to, to 524. 4'00" to, to 525.  
4'00" to, to 526. 4'00" to, to 527. 4'00" to, to 528. 4'00" to, to 529. 4'00" to, to 530. 4'00" to, to 531. 4'00" to, to 532.  
4'00" to, to 533. 4'00" to, to 534. 4'00" to, to 535. 4'00" to, to 536. 4'00" to, to 537. 4'00" to, to 538. 4'00" to, to 539.  
4'00" to, to 540. 4'00" to, to 541. 4'00" to, to 542. 4'00" to, to 543. 4'00" to, to 544. 4'00" to, to 545. 4'00" to, to 546.  
4'00" to, to 547. 4'00" to, to 548. 4'00" to, to 549. 4'00" to, to 550. 4'00" to, to 551. 4'00" to, to 552. 4'00" to, to 553.  
4'00" to, to 554. 4'00" to, to 555. 4'00" to, to 556. 4'00" to, to 557. 4'00" to, to 558. 4'00" to, to 559. 4'00" to, to 560.  
4'00" to, to 561. 4'00" to, to 562. 4'00" to, to 563. 4'00" to, to 564. 4'00" to, to 565. 4'00" to, to 566. 4'00" to, to 567.  
4'00" to, to 568. 4'00" to, to 569. 4'00" to, to 570. 4'00" to, to 571. 4'00" to, to 572. 4'00" to, to 573. 4'00" to, to 574.  
4'00" to, to 575. 4'00" to, to 576. 4'00" to, to 577. 4'00" to, to 578. 4'00" to, to 579. 4'00" to, to 580. 4'00" to, to 581.  
4'00" to, to 582. 4'00" to, to 583. 4'00" to, to 584. 4'00" to, to 585. 4'00" to, to 586. 4'00" to, to 587. 4'00" to, to 588.  
4'00" to, to 589. 4'00" to, to 590. 4'00" to, to 591. 4'00" to, to 592. 4'00" to, to 593. 4'00" to, to 594. 4'00" to, to 595.  
4'00" to, to 596. 4'00" to, to 597. 4'00" to, to 598. 4'00" to, to 599. 4'00" to, to 600. 4'00" to, to 601. 4'00" to, to 602.  
4'00" to, to 603. 4'00" to, to 604. 4'00" to, to 605. 4'00" to, to 606. 4'00" to, to 607. 4'00" to, to 608. 4'00" to, to 609.  
4'00" to, to 610. 4'00" to, to 611. 4'00" to, to 612. 4'00" to, to 613. 4'00" to, to 614. 4'00" to, to 615. 4'00" to, to 616.  
4'00" to, to 617. 4'00" to, to 618. 4'00" to, to 619. 4'00" to, to 620. 4'00" to, to 621. 4'00" to, to 622. 4'00" to, to 623.  
4'00" to, to 624. 4'00" to, to 625. 4'00" to, to 626. 4'00" to, to 627. 4'00" to, to 628. 4'00" to, to 629. 4'00" to, to 630.  
4'00" to, to 631. 4'00" to, to 632. 4'00" to, to 633. 4'00" to, to 634. 4'00" to, to 635. 4'00" to, to 636. 4'00" to, to 637.  
4'00" to, to 638. 4'00" to, to 639. 4'00" to, to 640. 4'00" to, to 641. 4'00" to, to 642. 4'00" to, to 643. 4'00" to, to 644.  
4'00" to, to 645. 4'00" to, to 646. 4'00" to, to 647. 4'00" to, to 648. 4'00" to, to 649. 4'00" to, to 650. 4'00" to, to 651.  
4'00" to, to 652. 4'00" to, to 653. 4'00" to, to 654. 4'00" to, to 655. 4'00" to, to 656. 4'00" to, to 657. 4'00" to, to 658.  
4'00" to, to 659. 4'00" to, to 660. 4'00" to, to 661. 4'00" to, to 662. 4'00" to, to 663. 4'00" to, to 664. 4'00" to, to 665.  
4'00" to, to 666. 4'00" to, to 667. 4'00" to, to 668. 4'00" to, to 669. 4'00" to, to 670. 4'00" to, to 671. 4'00" to, to 672.  
4'00" to, to 673. 4'00" to, to 674. 4'00" to, to 675. 4'00" to, to 676. 4'00" to, to 677. 4'00" to, to 678. 4'00" to, to 679.  
4'00" to, to 680. 4'00" to, to 681. 4'00" to, to 682. 4'00" to, to 683. 4'00" to, to 684. 4'00" to, to 685. 4'00" to, to 686.  
4'00" to, to 687. 4'00" to, to 688. 4'00" to, to 689. 4'00" to, to 690. 4'00" to, to 691. 4'00" to, to 692. 4'00" to, to 693.  
4'00" to, to 694. 4'00" to, to 695. 4'00" to, to 696. 4'00" to, to 697. 4'00" to, to 698. 4'00" to, to 699. 4'00" to, to 700.  
4'00" to, to 701. 4'00" to, to 702. 4'00" to, to 703. 4'00" to, to 704. 4'00" to, to 705. 4'00" to, to 706. 4'00" to, to 707.  
4'00" to, to 708. 4'00" to, to 709. 4'00" to, to 710. 4'00" to, to 711. 4'00" to, to 712. 4'00" to, to 713. 4'00" to, to 714.  
4'00" to, to 715. 4'00" to, to 716. 4'00" to, to 717. 4'00" to, to 718. 4'00" to, to 719. 4'00" to, to 720. 4'00" to, to 721.  
4'00" to, to 722. 4'00" to, to 723. 4'00" to, to 724. 4'00" to, to 725. 4'00" to, to 726. 4'00" to, to 727. 4'00" to, to 728.  
4'00" to, to 729. 4'00" to, to 730. 4'00" to, to 731. 4'00" to, to 732. 4'00" to, to 733. 4'00" to, to 734. 4'00" to, to 735.  
4'00" to, to 736. 4'00" to, to 737. 4'00" to, to 738. 4'00" to, to 739. 4'00" to, to 740. 4'00" to, to 741. 4'00" to, to 742.  
4'00" to, to 743. 4'00" to, to 744. 4'00" to, to 745. 4'00" to, to 746. 4'00" to, to 747. 4'00" to, to 748. 4'00" to, to 749.  
4'00" to, to 750. 4'00" to, to 751. 4'00" to, to 752. 4'00" to, to 753. 4'00" to, to 754. 4'00" to, to 755. 4'00" to, to 756.  
4'00" to, to 757. 4'00" to, to 758. 4'00" to, to 759. 4'00" to, to 760. 4'00" to, to 761. 4'00" to, to 762. 4'00" to, to 763.  
4'00" to, to 764. 4'00" to, to 765. 4'00" to, to 766. 4'00" to, to 767. 4'00" to, to 768. 4'00" to, to 769. 4'00" to, to 770.  
4'00" to, to 771. 4'00" to, to 772. 4'00" to, to 773. 4'00" to, to 774. 4'00" to, to 775. 4'00" to, to 776. 4'00" to, to 777.  
4'00" to, to 778. 4'00" to, to 779. 4'00" to, to 780. 4'00" to, to 781. 4'00" to, to 782. 4'00" to, to 783. 4'00" to, to 784.  
4'00" to, to 785. 4'00" to, to 786. 4'00" to, to 787. 4'00" to, to 788. 4'00" to





**EXTRAJUDICIAL SETTLEMENT OF ESTATE OF THE DECEASED JIMMY GUBARON BEALBERT WITH WAIVER OF RIGHTS**

NOTICE is hereby given that the estate of the deceased **JIMMY GUBARON BEALBERT** who died intestate on December 1, 2019 at Iloilo City, Cebu, consisting of a property with description described as follows:

- Make: HONDA
- Make: CUMMINS
- Body Type: TC RTR
- Chassis No.: KYV1000433
- Motor/Vehicle No.: KYV00005470
- Plate No.: 0K230
- Registration No.: 10190701
- Certificate of Financial No.: 2019-06250 issued by the Treasury Regulatory Unit (TRU) valid from October 9, 2019 to October, 2020

has been adjudicated and extrajudicially settled by and among his heirs with waiver of rights and consent in favor of **ERRY L. BEALBERT** on October 27, 2020 at City of Iloilo, Cebu before Notary Public **Atty. Carlos Domestico C. Manzano** and entered in his Notarial Register at Div. No. 411, Page No. 27, Book No. XXXV, Series of 2020.

(Sign All Heirs)

Publication: **DIWARYO KABITENYO**  
Date: November 25, 30 and December 7, 2020

**Breakthrough in studying the enzyme that ultimately produces fish odor syndrome**

Fish odor syndrome (trimethylaminuria) is a debilitating condition which causes an unpleasant fishy smell that can affect breath, sweat, pee and vaginal fluids. The cause of fish odor syndrome is when an enzyme pathway in the gut called CoA/R, produces TMA, the happens when the enzyme breaks down a TMA precursor called L-Carnitine which is found in fatty fish and meat. If an individual lacks a functional form enzyme called TMO1, they can't degrade TMA into a non-odorous chemical form, TMAO (trimethylamine oxide). The TMA then builds up in the body and ends up in body fluids.

**EXTRAJUDICIAL SETTLEMENT OF ESTATE OF THE DECEASED SPOUSES POTENCIANO MARCELO LEGASPI AND RAMONA ARELLANO LEGASPI**

NOTICE is hereby given that the estate of the deceased **POTENCIANO MARCELO LEGASPI** and **RAMONA ARELLANO LEGASPI** who both died intestate on October 9, 1991 and on June 25, 2019 both at Iloilo City, Cebu, respectively consisting of a parcel of land with improvements located at **Tring I, Bacojo Tty, Cebu** and covered by TCT No. T-15525 of the Registry of Deeds for the Province of Cebu, containing an area of **TWO HUNDRED FORTY EXACT (240) SQ METERS** has been adjudicated and extrajudicially settled by and among their heirs with waiver of rights and interests in the said real property with improvements in favor of **OLYDNE STA. ANA-CAMPOS** on November 4, 2020 at the City of Iloilo, Cebu, before Notary Public **Atty. Carlos Domestico C. Manzano** and entered in his Notarial Register at Div. No. 206, Page No. 18, Book No. XXXV, Series of 2020.

(Sign All Heirs)

Publication: **DIWARYO KABITENYO**  
Date: November 25, 30 and December 7, 2020

**REPUBLIC OF THE PHILIPPINES REGIONAL TRIAL COURT PUERTO RICAL REGION BRANCH 22 ILOILO, CEBU**

**IN RE: PETITION FOR APPOINTMENT AS NOTARY PUBLIC.**

RP Case No. 224-20

**ATTY. EARL ALFRED R. REYES,**  
Petitioner.

**NOTICE OF HEARING**

Notice is hereby given that a hearing on the Petition for the appointment as Notary Public of **ATTY. EARL ALFRED R. REYES** shall be held on December 02, 2020 at 1:30 in the afternoon. Any person who has any cause of action to object to the granting of the petition may file a written motion opposing same and answer by the respondent before the day of hearing.

SO ORDERED.

City of Iloilo, Cebu, November 14, 2020.

Writen by: **Atty. Carlos Domestico C. Manzano**  
Notary Public

Publication: **DIWARYO KABITENYO**  
Date: November 25-30 and December 7, 2020

Structural basis of sensitive histone-specific CoA substrate specificity, inhibition and inter-substrate exchange reaction published in the Journal of Biological Chemistry.

In the paper Biological Chemistry,

Republic of the Philippines  
Regional Trial Court  
BRANCH 22  
City of Iloilo, Cebu

**CAESAR R. DARIAN,**  
Petitioner.

vs.

**CIVIL CASE NO. 68747**  
For Declaration of Nullity of Marriage.

**ALISON LOUISE CARLAW,**  
Respondent.

**DECISION**

Case

**WHEREFORE,** judgment is hereby rendered declaring the marriage between petitioner, **CAESAR R. DARIAN** and respondent **ALISON LOUISE CARLAW** celebrated on 25 July 2003 in Las Pilas City as null and void for being bigamous under Article 21-41 of the Family Code.

Upon the Verdict of the Decision, the Local Civil Registrar of Las Pilas City, as well as the Philippine Statistics Authority (PSA), Quince City are ordered to correct their respective Books of Marriage for the marriage contracted by the named parties and to file thereof with the DepEd in accordance with law.

Petitioner is directed to cause the registration of this Decision, Entry of Judgment and the Heirs of Nullity of Marriage in the Civil Registrar of Las Pilas City, and Iloilo, Cebu and with the Philippine Statistics Authority, Quince City.

Accordingly, the property relations of the parties in DISOLVED. It does not give protection to be liquidated, partitioned and dissolved. The Decision shall become final upon the expiration of the period provided for by the Rules and the corresponding Entry of Judgment shall be made if by finality be promulgated at New York in Accord to that by any party. The Public Prosecutor in the Iloilo Court.

For each the parties, their respective counsel, the Office of the Solicitor General, the Public Prosecutor, the Civil Registrar of Las Pilas City, and Iloilo City, Cebu and the Philippine Statistics Authority Quince City, a copy of this Decision.

Furthermore, in accordance with Section 24 of A.M. 02-11-12, the petitioner is hereby ordered to publish the operative portion of this Decision once in a newspaper of general circulation.

SO ORDERED.

City of Iloilo, Cebu, 20 November 2020.

Writen by: **Atty. Carlos Domestico C. Manzano**  
Notary Public

Publication: **DIWARYO KABITENYO**  
Date: November 25-30 and December 7, 2020

transcribed from the newly finalized on the school of Life Science - CoA/R process of the CoA/R enzyme, which Warwick have spent 10 years and money in





# Scientists identify brain cells that help drive bodily reaction to fear, anxiety

Strong emotions such as fear and anxiety tend to be accompanied and reinforced by measurable bodily changes including increased heart rate and respiration, and dilation of the eyes' pupils. These so-called "physiological arousal responses" are often abnormally high or low in psychiatric illnesses such as anxiety disorders and depression. Now, scientists at the UNC School of Medicine have identified a population of brain cells whose activity appears to drive such arousal responses.

The scientists, whose study is published in *Cell Reports*, found that artificially forcing the activity of these brain cells in mice produced an arousal response in the form of dilated pupils and faster heart rate, and worsened

adjunct assistant professor in the Department of Psychiatry, led this study when they were members of the UNC laboratory of Gerard Stuber, PhD, who is now at the University of Washington.

"This work not only identifies a new population of neurons implicated in arousal and anxiety, but also opens the door for future experiments to systematically examine how molecularly defined cell types contribute to complex emotional and physiological states," Stuber said. "This will be critical for moving forward the developing new treatments for neuropsychiatric disorders."

Anxiety disorders, depression, and other disorders featuring abnormally high or low arousal responses affect a large fraction of the

human population, including tens of millions of adults in the United States alone. Treatments may alleviate symptoms, but many have adverse side effects, and the root causes of these disorders generally remain obscure.

Untangling these roots amid the complexity of the brain has been an enormous challenge, one that laboratory technology has only recently begun to surmount.

Rodriguez-Romaguera, Ung, Stuber and colleagues examined a brain region within the amygdala called the BNST (bed nucleus of the stria terminalis), which has been linked in prior research to fear and anxiety-like behaviors in mice.

Increasingly, scientists view this region as a promising target for future psychi-

atric drugs. In this case, the researchers aimed in on a set of BNST neurons that express a neurotransmitter gene, *Procr*, known to be linked to pain sensitivity and more recently to motivation.

The team used a relatively new technique called two-photon microscopy to directly image BNST *Procr* neurons in the brains of mice while the mice were presented with noxious or appealing odors — stimuli that reliably induce fear/anxiety and reward behaviors, respectively, along with the appropriate arousal responses.

In this way, the scientists found that activity in these neurons tended to be accompanied by the rapid dilation of the pupils of the mice when the animals were presented with either of these odor stimuli.

The researchers then used another advanced technique called optogenetics — using light to control genetically engineered cells — to artificially drive the activity of the BNST *Procr* neurons. They found that spurring on BNST *Procr* activity triggered a pupillary response, as well as increased heart rate. Optogenetically driving the neurons while the mice underwent an anxiety-inducing maze test (traditionally used to assess anxiety drugs) increased the animals' signs of anxiety, while optogenetically quieting the neurons had the opposite effect.

"Essentially we found that activating these BNST *Procr* neurons drives arousal responses and worsens anxiety-like states," Rodriguez-Romaguera said.

# COVID-19 infection combined with blood clots worsens patient outcomes, study finds

While respiratory issues continue to be the most common symptom of a COVID-19 infection, new research indicates the disease could also be associated with hypercoagulability or increased tendency of the blood to clot. In a new study published

November 20, 2020 in the journal *EClinicalMedicine* by The Lancet, researchers from UC San Diego Health found that blood clots led to an increased risk of death by 74 percent.

Led by Mahmood Malas, MD, division chief of Vascular and Endovascular Surgery at UC San Diego Health, researchers reviewed 42 different studies involving more than 4,000 patients diagnosed with COVID-19. Using random models, the team

produced summary

rates and odds ratios of mortality in COVID-19 patients with thromboembolism, blood clots – and compared them to patients without these conditions to determine what effect or increased tendency blood clots may have on risk of death.

"We began to notice a really unusual manifestation of venous and arterial thromboembolism in patients with COVID-19," said Malas. "In addition to higher instances of blood clots, the mortality for COVID-19

and with thromboembolism was much higher compared to patients without clots. It's unusual because we have never seen anything like this with other respiratory infections."

Overall, 30 per-

cent of the COVID-19 patients were found to have blood clots in the veins, and among patients in the intensive care unit, that statistic increased to 31 percent.

Blood clots in the vein, or deep vein thrombosis, can reach the lungs and develop into pulmonary embolism, resulting in higher risk of death. Blood clots in the arteries may lead to limb amputation if not treated surgically in a timely fashion.

In the study, Malas and colleagues performed a systematic review through meta-analysis, which is a statistical method that allowed researchers to combine multiple studies to produce a single comprehensive paper.

"The collective

experience in the literature – as captured in this meta-analysis study brings additional light on the importance of blood vessel clotting events in hospitalized patients with COVID-19," said Bryan Clary, MD, surgeon-in-chief at UC San Diego Health and co-author of the study.

"While the frequency of these events is much higher than expected, our study likely underestimates the incidence of thromboembolism in the global population of patients with COVID-19, including non-hospitalized patients."

According to Malas, arterial blood clots developing in people with the flu is extremely rare, and the rate of clotting in patients with COVID-19

is higher than what is reported for other viral pandemics, including the H1N1 influenza of 2009.

Similar symptoms are shared between influenza and SARS-CoV-2, such as fever, cough, shortness of breath, or fatigue. Blood clotting can occur in patients hospitalized with the flu, but only in veins. For patients with COVID-19, blood clots can appear in either veins or arteries.

Typically, clotting in the arteries is caused by health factors such as arterial stiffening, high blood pressure, high cholesterol, diabetes, or lifestyle choices like smoking. Patients who are hospitalized for long periods of time are also more at risk for blood clots in the veins

due to immobility.

Blood clots in the veins are treated or prevented with prescribed blood thinners. Proactively administering such medications to hospitalized patients can also help prevent clots from forming. Clinical trials are ongoing to determine how blood thinners can reduce the risk of clotting in patients with COVID-19.

"What we can learn from this paper is due diligence," said

Malas. "We're still in the process of understanding the pathophysiology of COVID-19, so it's important to have a low index of suspicion when it comes to this infection to ensure we're doing all we can to mitigate the spread and prevent serious outcomes."

# Identifying compound classes through machine learning

Everything that lives has metabolites, produces metabolites and consumes metabolites. These molecules arise as intermediate and end products from chemical processes in an organism's metabolism. Therefore, they not only have huge significance for our lives, but they also provide valuable information about the condition of a living being or an environment. For example, metabolites can be used to detect diseases or, in the field of environmental technology, to examine drinking water samples. However, the diversity of these chemical compounds causes difficulties in scientific research. To date, only few molecules and their properties are known. If a sample is analyzed in the laboratory, only a relatively small portion of it can be identified, while the

majority of molecules remain unknown. Bioinformaticians at Friedrich Schiller University Jena, Germany together with colleagues from Finland and the USA, have now developed a unique method with which all metabolites in a sample can be taken into account, thus considerably increasing the knowledge gained from examining such molecules. The team reports on its successful research in the scientific journal *Nature Biotechnology*.

"Mass spectrometry, one of the most widely used experimental methods for analysing metabolites, identifies only those molecules that can be uniquely assigned by matching them against a database. All other, previously unknown molecules contained in the sample do not provide much infor-

mation," explains Prof. Sebastian Böcker from the University of Jena. "With our newly developed method, called CANOPUS, however, we also obtain valuable insight from the unidentified metabolites in a sample, as we can assign them to existing compound classes."

CANOPUS works in two phases: first, the method generates a 'molecular fingerprint' from the fragmentation spectrum measured by means of mass spectrometry. This contains information about the structural properties of the measured molecule. In the second phase, the method uses the molecular fingerprint to assign the metabolite to a specific compound class without having to identify it.

"Machine learning methods usually require large amounts of data in order to be trained. In contrast,

our two-stage process makes it possible in the first step to train on a comparatively small amount of data of tens of thousands of fragmentation mass spectra. Then, in the second step, the characteristic structural properties that are significant for a compound class can be determined from millions of structures," explains Dr Kai Döhreop from the University of Jena.

The system therefore identifies these structural properties in an unknown molecule within a sample and then assigns it to a specific compound class.

"This information alone is sufficient to answer many important questions," Böcker emphasises. "The precise identification of a metabolite would be far more complex and is often not necessary at all." The CANOPUS method uses a deep

neural network predicting around 2,500 compound classes.

With their method, the Jena bioinformaticians have compared, for example, the intestinal flora of mice in which one experimental group had been treated with antibiotics. The examinations show which metabolites the mouse and its intestinal flora produce. Such research results can provide important information about the human digestive and metabolic system. Through two further application ex-

amples, which they present in their study, the Jena scientists demonstrate the functionality and power of the CANOPUS method.

With the new method, the bioinformaticians from Jena are expanding the possibilities of the search engine for molecular structures "CSI-FingerID," which they have

been making available to the international research community for around five years. Researchers around the world now use this service thousands of times a day to compare a mass spectrum from a sample with various online databases, in order to identify a metabolite more precisely. "We are approaching the one hundred millionth request and we are sure that CANOPUS will further increase the number of users," says Sebastian Böcker.

The new process strengthens the field of metabolomics – that is, research on these tiny, important small molecules – and increases its potential in many research areas, such as pharmaceuticals. Many active pharmaceutical substances in use for decades, such as penicillin, are metabolites; others could be developed with their help.

# Unique Schwann cells: the eyes have it

The insulation around nerve cell components in our corneas have unique properties, and little is known about them. But UConn School of Medicine neuroscientist professor Rayer Mohan believes his lab is on the verge of uncovering a path to better understanding that ultimately could lead to several vision-preserving advances.

Learning more about the cellular environment in the cornea, including what are known as glial cells that wrap around the nerve cells' axons, could have implications for healing after surgeries and corneal transplants, as well as nerve regeneration, not just in the eyes but pro-

centially in other systems of the body.

In a paper published in the Journal of Neuroscience Research, lead author Paula Bargagna-Mohan, assistant professor of neuroscience, details a method of characterizing every cell in the cornea using an approach known as single-cell RNA sequence analysis to answer questions about the cornea's healing process. The study was done through a collaboration with Paul Rabson, associate professor and director of single cell biology at The Jackson Laboratory for Genomic Medicine (JAX), which houses state-of-the-art facilities for this type of research.

"Going in we knew there would be challenges," says Bargagna-Mohan, a recipient of a UConn Research Excellence Program award. "After several attempts, we were finally able to optimize our experimental approach to our advantage. I was extremely excited to get the funding from the UConn Vice President for Research at this critical time to drive this project."

A material known as myelin insulates axons of nerve fibers and enhances transmission of impulses among neurons. But nature has made the cornea an exception. Myelin in the cornea would interfere with light transmission.

# Boosting stem cell activity can enhance immunotherapy benefits

Immune-system T cells have been reprogrammed into regenerative stem cell-like memory (TSCM) cells that are long-lived, highly active "super immune cells" with strong anti-tumor activity, according to new research from Georgetown Lombardi Comprehensive Cancer Center.

The reprogramming involves a novel approach the researchers developed that in-

cludes proteins known as MEK1/2. Currently, several MEK inhibitors are used to effectively treat melanoma, but this study demonstrates that MEK inhibition don't just target certain types of cancer cells, but rather, more broadly, reprogram T cells in fight many types of cancer.

The finding appears November 23, 2020, in Nature Immunology.

"Although immunotherapies have improved survival for cancer patients over recent years, survival rates remain sub-optimal. Therefore, there is an urgent need to develop novel, more effective anti-cancer immunotherapies," says Samir S. Khleif, MD, director of The Joslin and Tony Loop Immuno-Oncology Laboratory and lead of the team that conducted this research.



## Q & A on Consumer Rights

**Q:**  
**PROBLEMA SA PRODUCT QUALITY AND SAFETY?**

**A:**  
**WALA DAPAT!**  
MAY MGA QUALITY AT SAFETY STANDARDS UPANG MASIGURO ANG VALIDTASAN AT KASITAHAN NG KONSUMER.

For inquiries and to learn more, visit the nearest DTI office or visit [www.dti.gov.ph](http://www.dti.gov.ph) or call DTI Direct: 020-8236 or 0207-824-2282