

# AETHLON MEDICAL, INC.

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INVESTOR PRESENTATION

NASDAQ: AEMD

TIMOTHY C. RODELL, M.D., CHIEF EXECUTIVE OFFICER

AUGUST 2019



# FORWARD LOOKING STATEMENTS

*The following presentation may contain predictions, estimates, and other forward looking statements that involve risks and uncertainties, including whether and when our products are successfully developed and introduced; market acceptance of the Aethlon Hemopurifier<sup>®</sup> and other product offerings; regulatory delays, manufacturing delays, and other risks detailed in our SEC filings, which are accessible at [www.sec.gov](http://www.sec.gov) or on our website: [www.AethlonMedical.com](http://www.AethlonMedical.com)*

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# AETHLON MEDICAL, INC.

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## MEDICAL DEVICES FOR CANCER AND VIRAL DISEASES

- HEMOPURIFIER®
- EXOSOME SCIENCES, INC.
  - 80% OWNED SUBSIDIARY
  - DIAGNOSTICS FOR CANCER AND CTE

NASDAQ: AEMD

# THE AETHLON HEMOPURIFIER®

DESIGNATED A "BREAKTHROUGH DEVICE" BY FDA



FDA DESIGNATED "BREAKTHROUGH DEVICE" FOR THE TREATMENT OF BOTH LIFE-THREATENING GLYCOSYLATED VIRUSES AND THE REMOVAL OF CANCER PROMOTING EXOSOMES

# THE AETHLON HEMOPURIFIER®

USES ESTABLISHED DIALYSIS INFRASTRUCTURE



SELF-CONTAINED CLOSED SYSTEM UNDER DEVELOPMENT

# THE AETHLON HEMOPURIFIER®

## UNIQUE MECHANISM OF ACTION

### COMBINATION MECHANISM OF ACTION

- SEPARATION BASED ON SIZE
- EXOSOMES AND VIRUSES ARE OF SIMILAR SIZE

### LECTIN CAPTURE BASED ON GLYCOSYLATION (SUGARS)

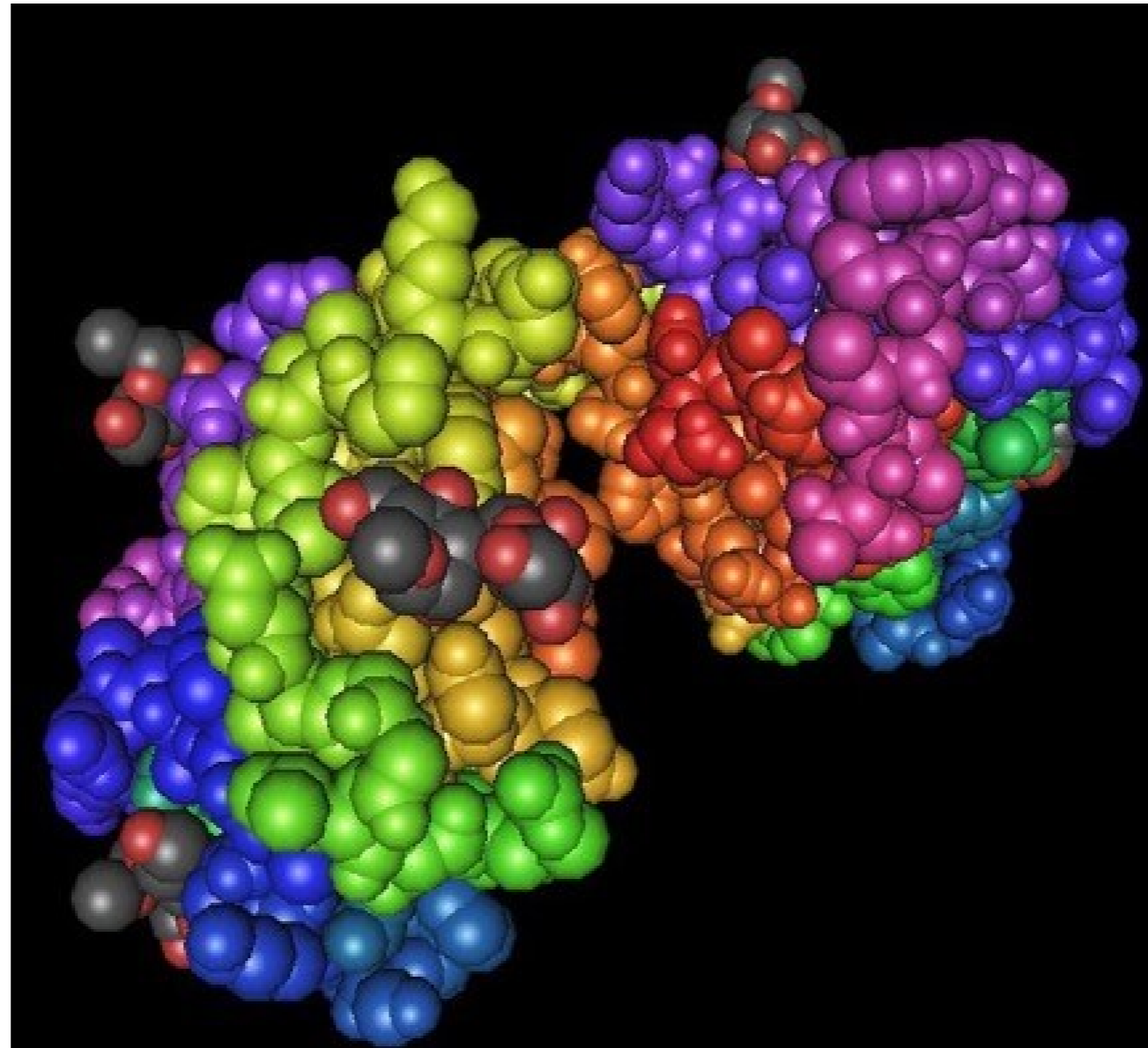
- BOTH EXOSOMES AND MOST VIRUSES DISPLAY SAME SUGAR MOLECULES ON THEIR MEMBRANES
- LECTINS ARE PROTEINS THAT BIND SUGAR MOLECULES ON MEMBRANES



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# LECTINS BIND MEMBRANE SUGAR MOLECULES

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*Mannose (sugar) molecules in gray*

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# HEMOPURIFIER® PROGRAMS

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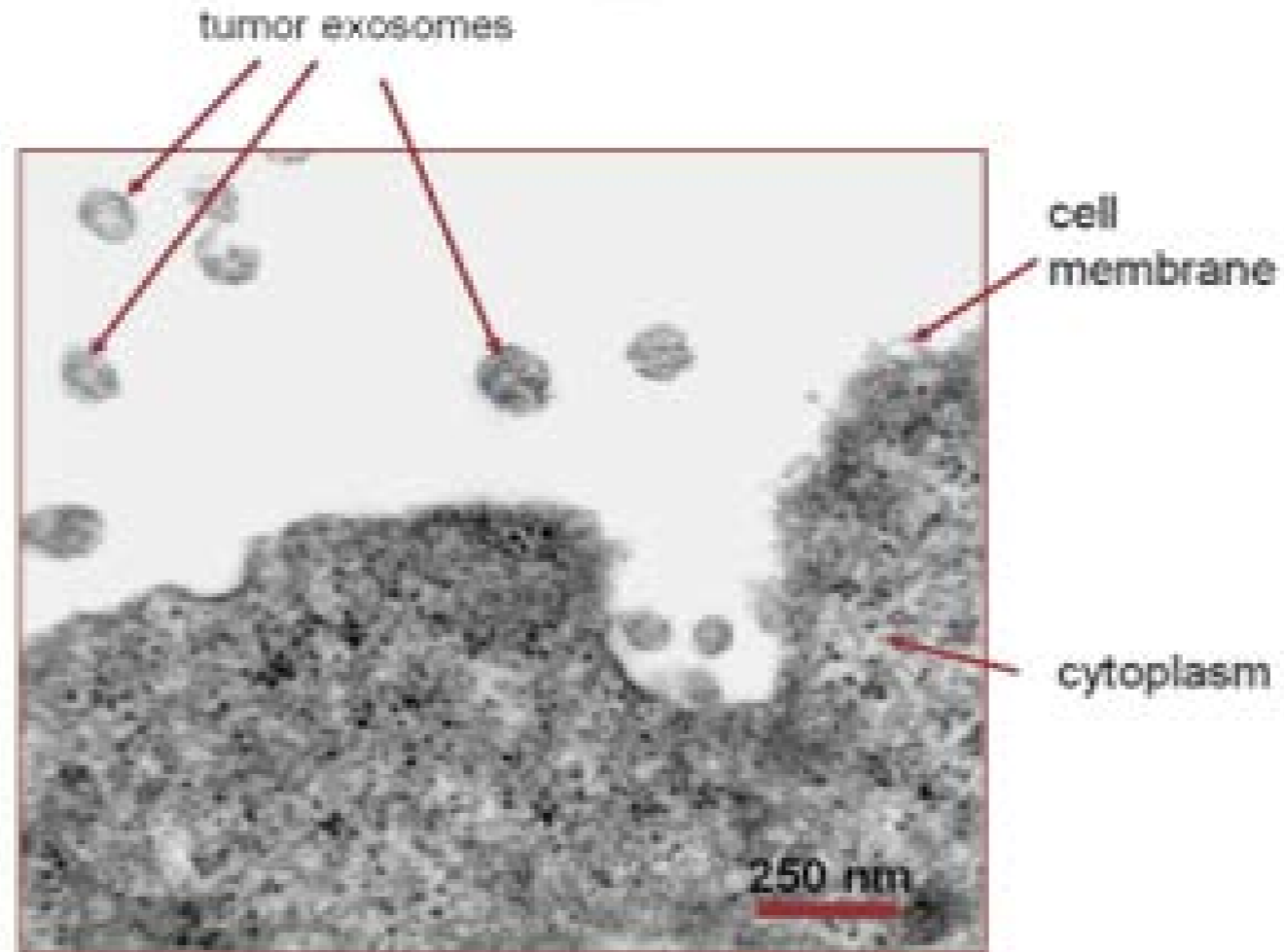
## ONCOLOGY

- CLEARANCE OF CANCER PROMOTING EXOSOMES
- SYNERGISTIC WITH CHEMOTHERAPY, IMMUNOTHERAPY, TARGETED AGENTS
- MULTIPLE POTENTIAL CLINICAL TARGETS
  - BREAST, HEAD AND NECK, GASTROINTESTINAL, MELANOMA, ETC.
- WELL CHARACTERIZED MARKETS, DEVELOPMENT PATHWAYS AND ENDPOINTS



# TUMOR-DERIVED EXOSOMES (TEX)

A SIGNIFICANT UNMET NEED IN CANCER CARE



*Exosomes being released by a tumor cell*

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# TUMOR-DERIVED EXOSOMES

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Play a Significant Role in Cancer Progression *not*  
Addressed with Current Cancer Therapies

- EXOSOMES ARE NOW UNDERSTOOD *NOT* TO BE INCONSEQUENTIAL CELL GARBAGE, BUT RATHER CRITICAL PLAYERS IN CELL-CELL COMMUNICATION
- TEX ARE VIRUS-SIZED VESICLES RELEASED IN ABUNDANCE BY TUMOR CELLS
- TEX PROMOTE TUMOR GROWTH, METASTASIS, CHEMOTHERAPY RESISTANCE AND IMMUNE SUPPRESSION

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# DEPLETION OF TUMOR-DERIVED EXOSOMES

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## Preceding Standard of Care Treatment Could Improve Outcomes

- TUMOR-DERIVED EXOSOMES INHIBIT ACTIVITY OF IMMUNOTHERAPIES AND CHEMOTHERAPIES, HINDERING BIOAVAILABILITY AND EFFICACY
- NO EXISTING TREATMENT FOR DEPLETING EXOSOMES
- AETHLON'S HEMOPURIFIER® MAY REPRESENT THE FIRST CANDIDATE TOWARD THIS GOAL

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# 2018 NATIONAL CANCER INSTITUTE (NCI) FUNDED STUDIES COMPLETED

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## Validation the Hemopurifier® Can Capture Tumor-Derived Exosomes

- CONTRACT FROM NCI

*“DEVICE STRATEGY FOR DIFFERENTIAL ISOLATION OF ONCOSOMES AND NON-MALIGNANT EXOSOMES”*

- HEMOPURIFIER® WAS DEMONSTRATED TO SUCCESSFULLY CAPTURE CANCER-DERIVED EXOSOMES FROM

- MELANOMA, BREAST, OVARIAN, H&N, ESOPHAGEAL, GBM

- ONGOING NCI SBIR GRANT

*“THE HEMOPURIFIER® DEVICE FOR TARGETED REMOVAL OF BREAST CANCER EXOSOMES FROM THE BLOOD CIRCULATION”*

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# DEVELOPMENT PLAN - ONCOLOGY

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## REQUIRED FOR APPROVAL AND COMMERCIALIZATION

- PRODUCT (MANUFACTURING, QUALITY)
- NON CLINICAL DATA (ANIMAL, OTHER)
- CLINICAL
  - EARLY FEASIBILITY STUDY (EFS) FOR SAFETY AND MOA
  - EFFICACY (COMBINATION WITH OR IMPROVEMENT OVER STANDARD OF CARE)
- REGULATORY
  - IDE > DATA GENERATION > MARKETING APPLICATION
  - BREAKTHROUGH DESIGNATION CAN ACCELERATE
- APPROVAL & COMMERCIALIZATION

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# HEMOPURIFIER® PROGRAMS

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## ONCOLOGY

- CLEARANCE OF CANCER PROMOTING EXOSOMES
- SYNERGISTIC WITH CHEMOTHERAPY, IMMUNOTHERAPY, TARGETED AGENTS
- MULTIPLE POTENTIAL CLINICAL TARGETS
  - BREAST, HEAD AND NECK, GASTROINTESTINAL, MELANOMA, ETC.
- WELL-CHARACTERIZED MARKETS, DEVELOPMENT PATHWAYS AND ENDPOINTS

## VIRAL

- ALL GLYCOSYLATED VIRUSES POTENTIALLY CAN BE CLEARED BY HEMOPURIFIER®
- FDA GRANTED EXPANDED ACCESS FOR EBOLA IN U.S. AND HEALTH CANADA GRANTED EQUIVALENT IN CANADA
- OTHER VIRAL TARGETS

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# HEMOPURIFIER® IN VIRAL DISEASES

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## ALL GLYCOSYLATED VIRUSES CAN BE POTENTIALLY CLEARED BY HEMOPURIFIER®

- CLEARANCE OF MULTIPLE DIFFERENT VIRUSES *IN VITRO*
  - HIV, DENGUE, WEST NILE, INFLUENZA, EBOLA, HERPES, MERS, FLU
- SAFETY AND VIRAL CLEARANCE IN 4 HUMAN CLINICAL TRIALS IN HCV
- ANECDOTAL EVIDENCE IN EBOLA AND HIV
- FDA EXPANDED ACCESS FOR EBOLA IN U.S. AND HEALTH CANADA GRANTED EQUIVALENT
- OTHER POTENTIAL VIRAL TARGETS
  - CMV, HANTAVIRUS, EBV

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# FDA BREAKTHROUGH DESIGNATION

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- GRANTED TO HEMOPURIFIER® FOR BOTH VIRAL AND CANCER APPLICATIONS
- MANDATED BY 21<sup>ST</sup> CENTURY CURES ACT
- FDA CHARACTERIZATION AS “ALL HANDS ON DECK”
- RAPID HIGH LEVEL COMMUNICATION BETWEEN FDA AND COMPANY
- SHORTENED COMMUNICATION TIMELINES
- POTENTIAL PATHWAY FOR ACCELERATED APPROVAL ON EARLY TIMEPOINTS
  - CONFIRMATORY POST APPROVAL STUDIES
- DOES NOT REMOVE REQUIREMENT FOR “SUBSTANTIAL EVIDENCE OF SAFETY AND EFFICACY” PRE-APPROVAL



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# SEASTAR CROSS LICENSE AGREEMENT

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- EXECUTED JULY 2019
- CROSS LICENSE TO SEASTAR CARTRIDGES AND HEMOPURIFIER®
- PROVIDES FOR CO-DEVELOPMENT TO EXPAND TARGET MARKETS
- INITIAL TARGETS ORGAN PRESERVATION AND TRANSPLANT

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# EXOSOME SCIENCES, INC.

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## DIAGNOSTICS BASED ON EXOSOME DETECTION AND CHARACTERIZATION

- EXOSOMAL TAU PROTEIN CORRELATES WITH EXPOSURE TO TRAUMA IN NFL PLAYERS  
- *J. ALZHEIMERS Dis. 2016*
- CONFIRMATORY STUDY ONGOING AT TGEN
- POTENTIAL DIAGNOSTIC FOR CTE IN LIVING PLAYERS
- ONCOLOGY APPLICATIONS IN DEVELOPMENT

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# AETHLON LEADERSHIP

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## TIMOTHY C. RODELL, M.D., CHIEF EXECUTIVE OFFICER

- PHYSICIAN SCIENTIST WITH > 30 YEARS OF DEVELOPMENT EXPERIENCE IN PUBLIC & PRIVATE COMPANIES, 3 IPOs IN U.S. AND ABROAD, 10 PRODUCTS FROM BENCH THROUGH LATE STAGE CLINICAL TRIALS

## CHARLES J. FISHER, JR., M.D., CHAIRMAN

- ACADEMIC & INDUSTRY THOUGHT LEADER IN SEPSIS & INFLAMMATION
- HEAD OF CRITICAL CARE - CLEVELAND CLINIC
- SENIOR EXECUTIVE - LILLY, ABBOTT, CARDIOME

## JAMES B. FRAKES, CHIEF FINANCIAL OFFICER

- 29 YEARS OF PUBLIC COMPANY CFO EXPERIENCE, INVESTMENT BANKING & VC

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# SUMMARY

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- UNIQUE HEMOPURIFIER<sup>®</sup> BLOOD PURIFICATION DEVICE
- TWO FDA BREAKTHROUGH DESIGNATIONS
- MULTIPLE THERAPEUTIC TARGETS IN CANCER AND VIRAL DISEASE
- MANAGEMENT TEAM WITH OVER 100 YEARS HEALTHCARE EXPERIENCE
- EXOSOME SCIENCES SUBSIDIARY
  - DIAGNOSTICS IN CANCER AND NEURODEGENERATIVE DISEASE
- NASDAQ: AEMD

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# QUESTIONS?

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