

WHERE THERE IS NO VISION, THE PEOPLE
PERISH.

PROVERBS 29:18

MONOCLONAL ANTIBODIES

"THE MAGIC BULLET"

DR JOE ABLES, DVM, MA

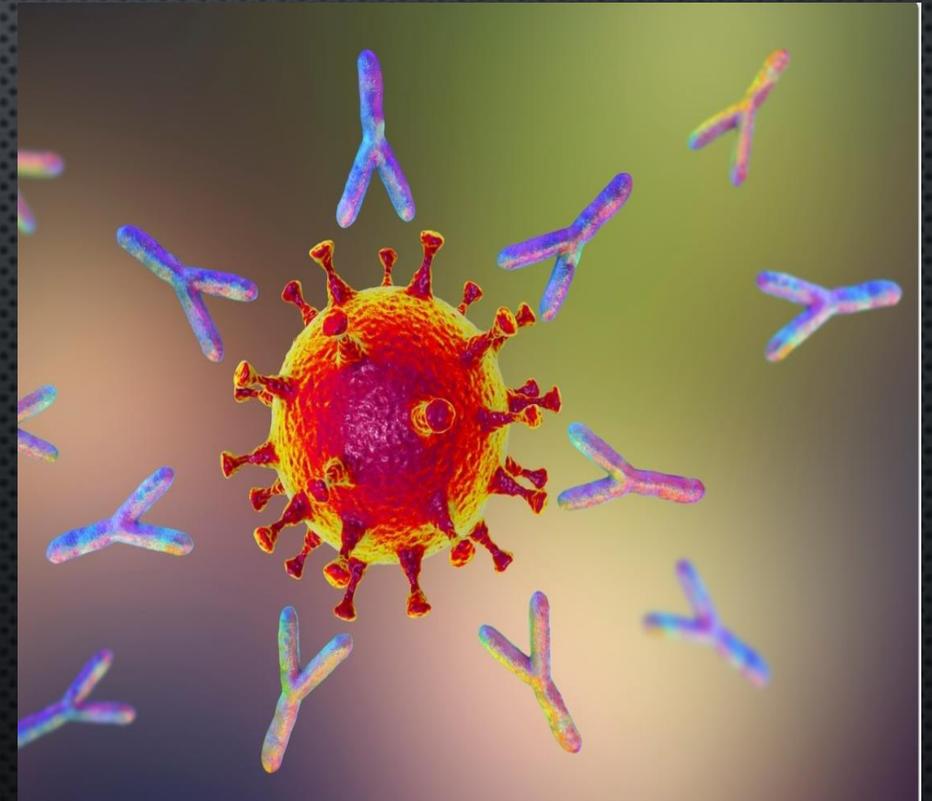
ENABLE USA

BIOSTONE ANIMAL HEALTH

INTRODUCTION

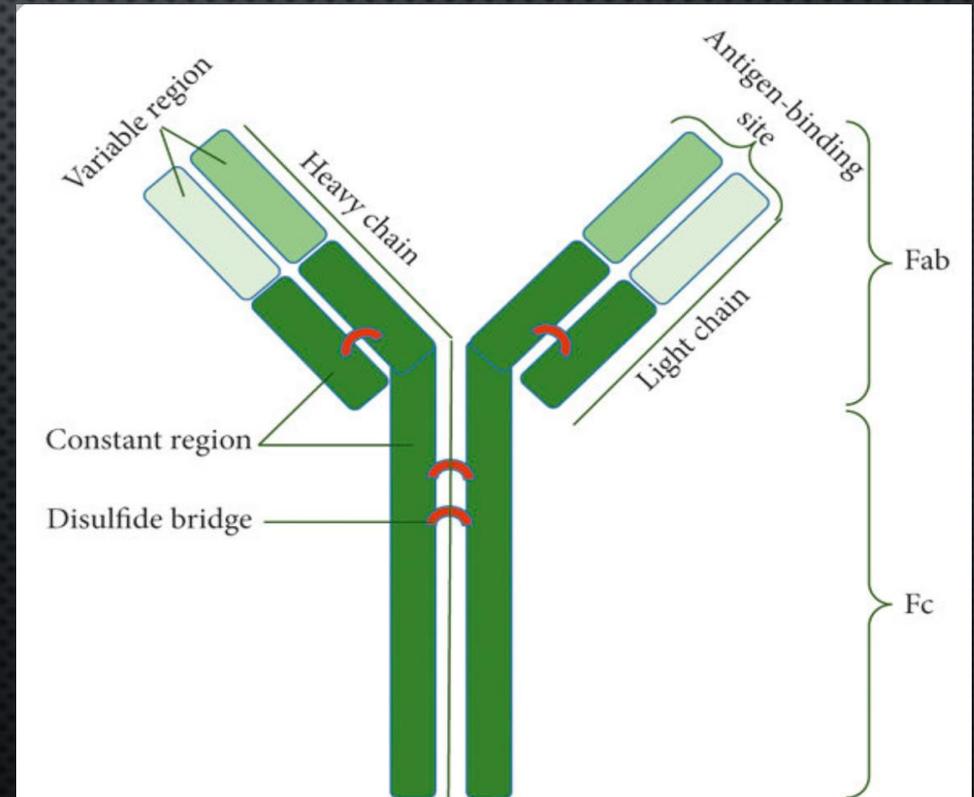
DEFINITION (MABS):

- LAB-ENGINEERED PROTEINS
- B LYMPHOCYTES (PLASMA CELLS) - CLONES
- DESIGNED TO TARGET **SPECIFIC ANTIGENS** IN THE BODY
- VIRUSES, BACTERIA, NEOPLASIA



IMMUNOGLOBULIN (IGG)

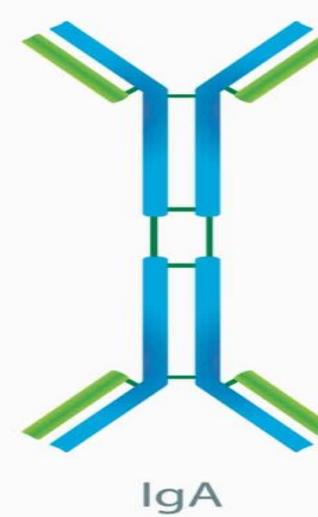
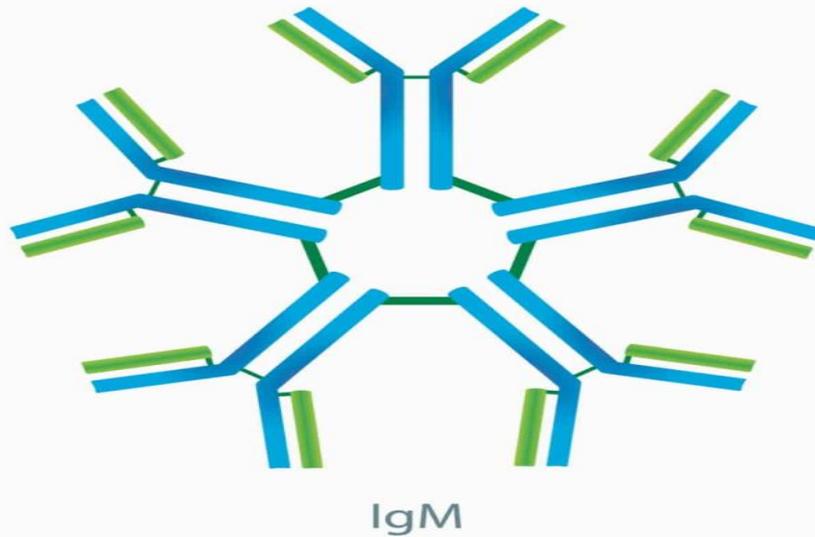
- **FAB REGION**
SPECIFIC BINDING TO ANTIGENS
- **FC REGION**
"TAIL" - ANTIBODY/IMMUNOGLOBULIN
STIMULATES THE IMMUNE SYSTEM



ANTIBODIES/IMMUNOGLOBULINS

- IGG- MAIN BLOOD ANTIBODIES (70-80%) - LONG TERM IMMUNITY
- IGA- MUCOSAL ANTIBODIES - HIGH CONCENTRATIONS IN BODILY FLUIDS (MILK/ INTESTINE)
- IGM- INITIAL RESPONSE ANTIBODIES (FIRST LINE OF DEFENSE-PRIMARY)
- IGE- ALLERGY ANTIBODIES – SKIN/ LUNGS, STIMULATE MAST CELLS- HISTAMINE
- IGD- B CELL RECEPTOR – MATURITY OF B CELLS (PLASMA CELLS)

ANTIBODIES/IMMUNOGLOBULINS AKA "COLSTRUM"



MONOCLONAL ANTIBODIES VS ANTIBIOTICS

MONOCLONALS

- HIGHLY SPECIFIC
- NO DRUG RESISTANCE
- LONG HALF-LIFE OF ACTIVITY/ STORAGE
- EXPENSIVE ?

ANTIBIOTICS

- "ANTI-BIO" DISRUPT NORMAL BIOME
- PROMOTE ANTIMICROBIAL RESISTANCE
- MULTIPLE DAYS OF TREATMENT
- EXPENSIVE ?

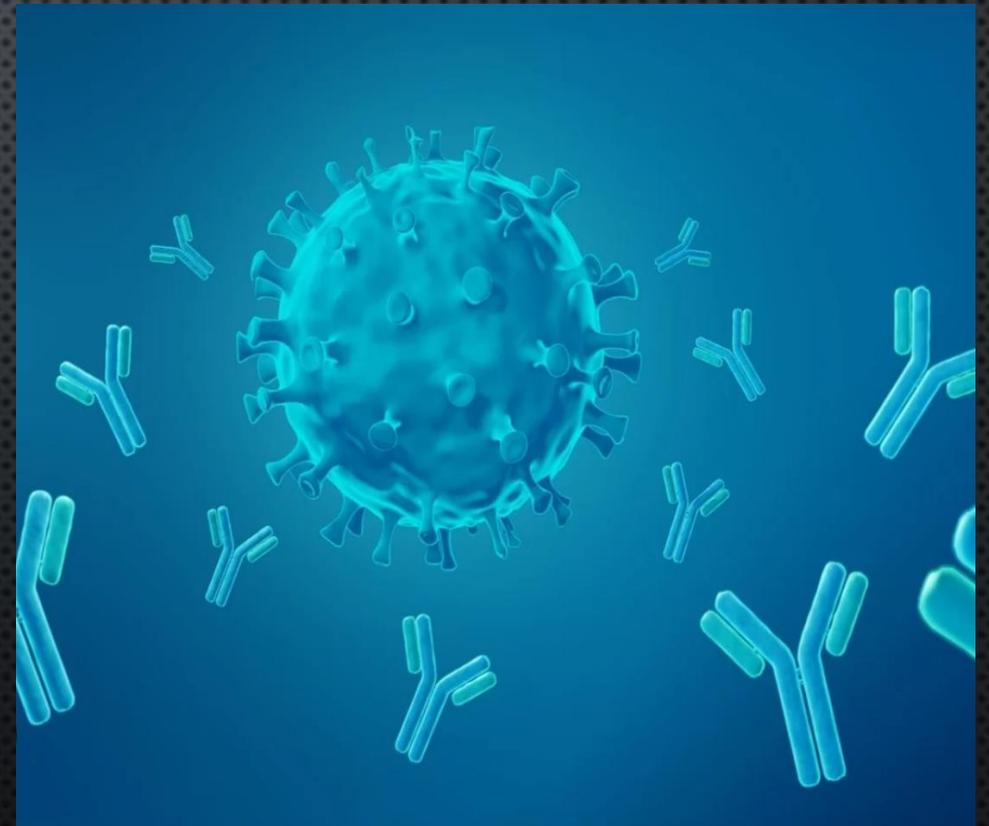
DIAGNOSTICS

- QUICK, RAPID, IN-EXPENSIVE
- COMPLETED ON THE FARM
- "CHUTE-SIDE TESTING"
- HERD PREVALENCE, FARM SPECIFIC
- PRE PURCHASE HEALTH INFORMATION



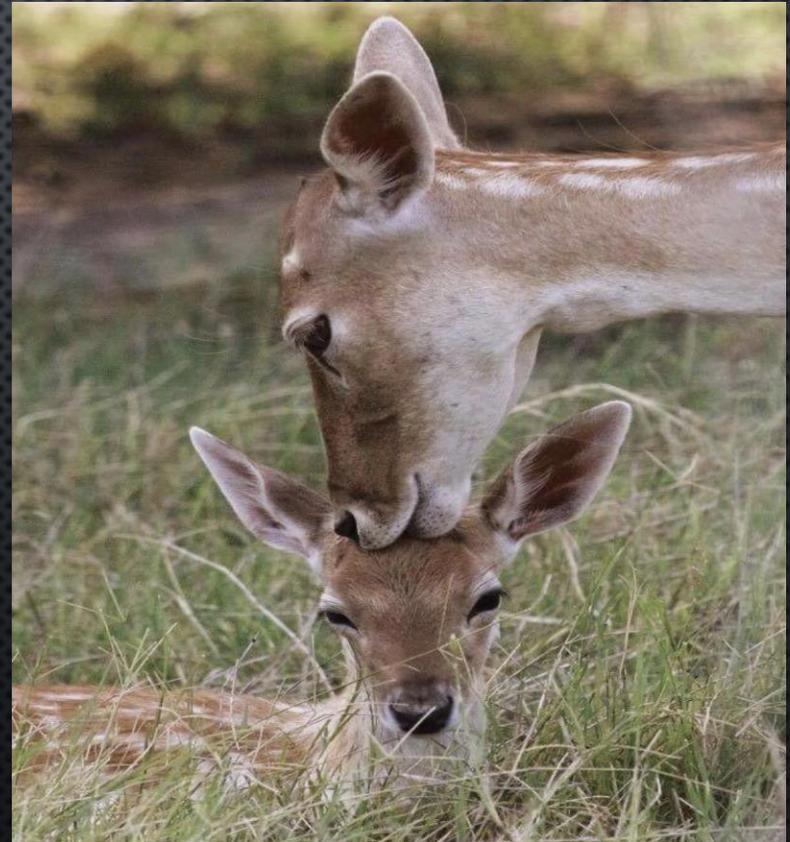
ADMINISTRATION

- **BY MOUTH (ORAL)**
 - 6-18 HRS. OF AGE —IMMUNOTHERAPY
(EX: EHD/BTV)
 - DAILY FEED SUPPLEMENT
- **INTRAVENOUS (IV)**
 - ACTIVE INFECTION —CLINICAL SIGNS
 - MASS PREVENTION (OUTBREAK)



CURRENT IMMUNOTHERAPIES

- DAY 1 FAWN IMMUNOTHERAPY EHD/BTV
 - POLYCLONAL IMMUNITY VS MONOCLONAL
- PANCREATITIS/ PARVO- DOGS AND CATS
- FARM SCREENING/ PRE PURCHASE EXAM
- FUSOBACTERIUM, TRUPERELLA, R. EQUI



CURRENT DIAGNOSTICS

- ELISA TESTING/TITER
 - EHD
 - BTV
- CHUTE-SIDE TESTING KITS
 - IN PRODUCTION



OUR VISION

- DETECTION/ DIAGNOSTIC –
ELISA, IMMUNOASSAYS
- TREATMENT OF DISEASE
(BACTERIAL, VIRAL, NEOPLASIA)
- TOOLS FOR PREVENTION - VACCINES
- **SAFE, PRECISE, ACCURATE CARE**



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SPECIAL THANKS !!!

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