

ECOTOXICOLOGIA

AULA TP 3

random] [plasmid

Chromosomes and plasmids are both types of DNA. Chromosomes are large molecules of DNA that contain the genetic information of an organism. Plasmids are smaller molecules of DNA that can replicate independently of the chromosome. They often carry genes that provide an advantage to the host cell, such as antibiotic resistance or the ability to degrade certain substances.

Chemically, both consist of long chains of nucleotides. Each nucleotide is composed of a phosphate group, a sugar, and a nitrogenous base. The phosphate groups are linked together by phosphodiester bonds, forming the backbone of the DNA molecule. The nitrogenous bases are attached to the sugar molecules and are responsible for the genetic information.

Chromosomes are typically found in the nucleus of eukaryotic cells and in the cytoplasm of prokaryotic cells. Plasmids are found in the cytoplasm of both eukaryotic and prokaryotic cells. They are often used in genetic engineering to introduce new genes into a host cell.

The first published reports of A-DNA were in 1953, although it was not until 1968 that it was first observed in nature. It is a compact, wide, and shallow structure, with a major groove that is very narrow and a minor groove that is very wide. It is typically found in regions of high salt concentration, such as in the DNA of certain archaea and in the DNA of some viruses.

The structure of A-DNA is determined by the sequence of the DNA bases. In A-DNA, the bases are stacked on top of each other, and the hydrogen bonds between them are in the major groove. This results in a compact, cylindrical structure that is resistant to chemical and physical damage.

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PLANEAMENTO DAS AULAS

AULA 1 – INTRODUÇÃO AOS TESTES DE ECOTOXICOLOGIA. BIOMARCADORES E DELINEAMENTO EXPERIMENTAL

AULA 2 – EFEITOS DO GLIFOSATO NO CRESCIMENTO DOS ORGANISMOS TESTE (TAXAS DE INIBIÇÃO E CONSTANTES DE INIBIÇÃO IC50). MARCADORES BIOFÍSICOS DE TOXICIDADE I

AULA 3 – MARCADORES BIOFÍSICOS DE TOXICIDADE II

AULA 4 – MARCADORES BIOQUÍMICOS DE TOXICIDADE I – PIGMENTOS VEGETAIS

AULA 5 – MARCADORES BIOQUÍMICOS DE TOXICIDADE II – PIGMENTOS VEGETAIS II

AULA 6 - MARCADORES BIOQUÍMICOS DE TOXICIDADE III – DANO MEMBRANAR

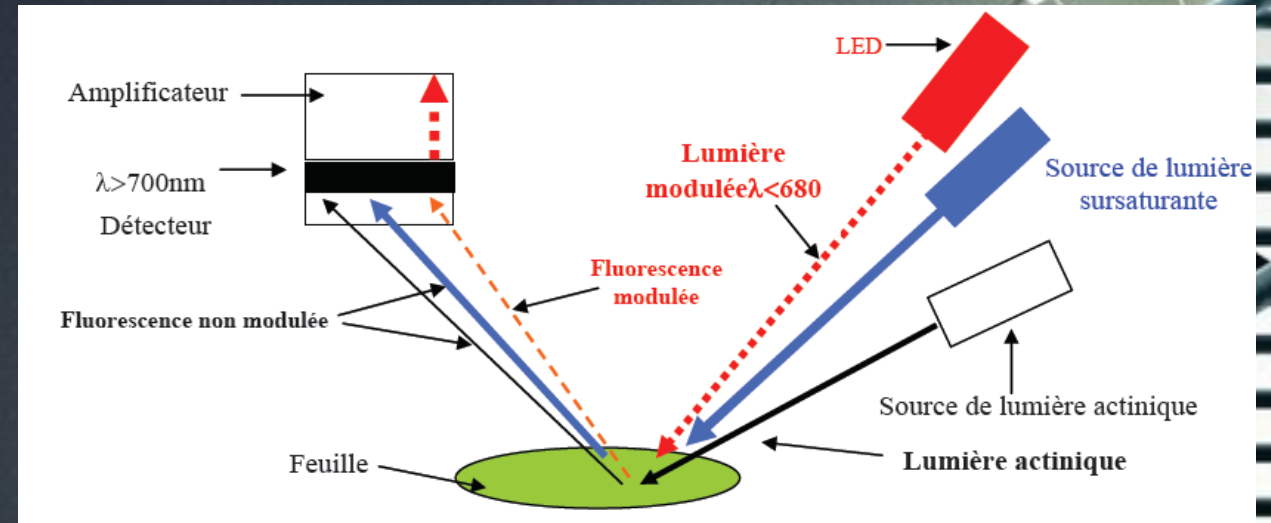
AULA 7 – MARCADORES BIOQUÍMICOS DE TOXICIDADE IV – DANO MEMBRANAR E ÁCIDOS GORDOS

AULA 8 - MARCADORES BIOQUÍMICOS DE TOXICIDADE III – SOD

AULA 9 – TÉCNICAS DE EXTRAÇÃO E ANÁLISE DE METAIS PESADOS

AULA 10 - NANOTOXICOLOGIA

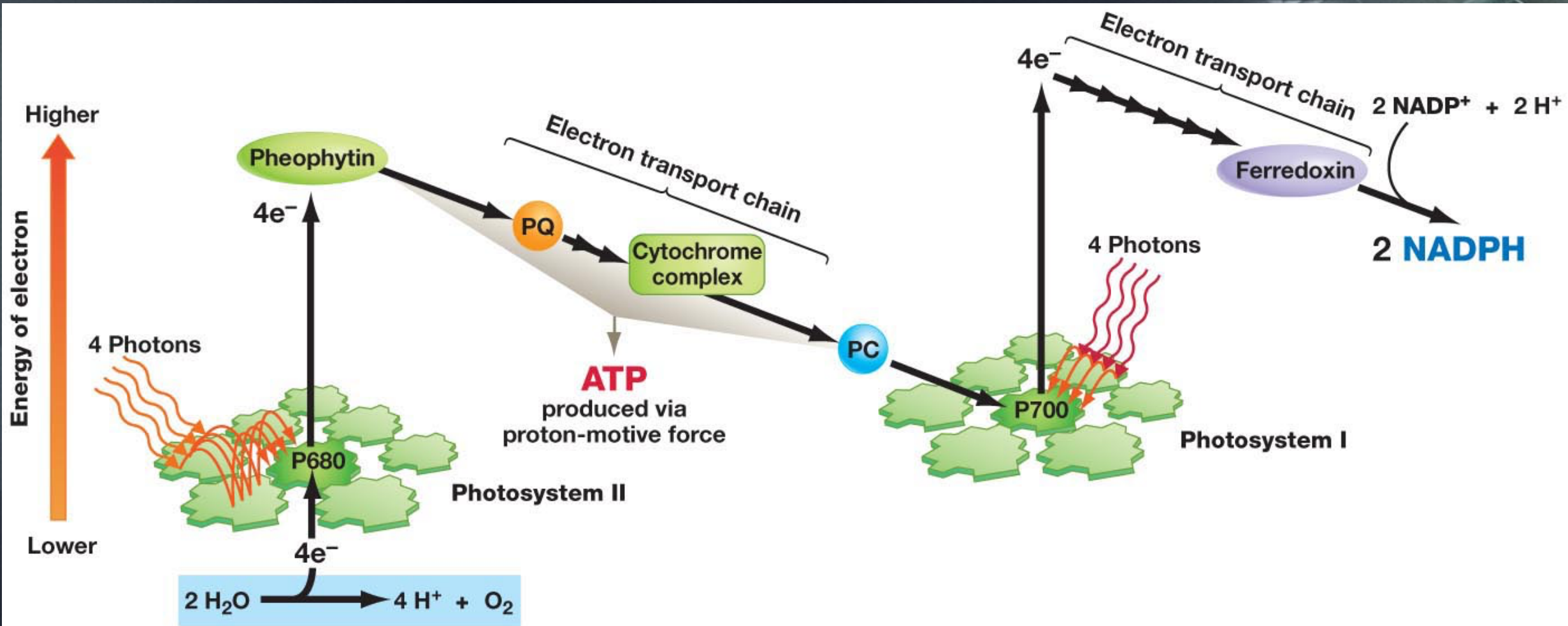
PULSE AMPLITUDE MODULATED (PAM) FLUOROMETRY



Chemically, DNA consists of two complementary strands of simple units called nucleotides. The two strands form a double helix structure. The two strands are held together by hydrogen bonds. These two strands are complementary to each other and as therefore are used as a template to synthesize a new strand. The sequence of these two strands is the genetic code that provides information. This information is used to synthesize proteins using the genetic code. The process of synthesizing proteins is called protein synthesis. The process of synthesizing proteins involves the copying of the DNA into the messenger RNA (mRNA) in a process called transcription.

Within cells, DNA is organized into long molecules called chromosomes. These chromosomes are duplicated before cells divide. In a process called cell replication, eukaryotic organisms undergo meiosis, which produces four haploid cells. Each cell contains half of the genetic information of the parent cell. The process of cell division is called mitosis. The process of cell division involves the copying of the DNA into the messenger RNA (mRNA) in a process called transcription.

PULSE AMPLITUDE MODULATED (PAM) FLUOROMETRY

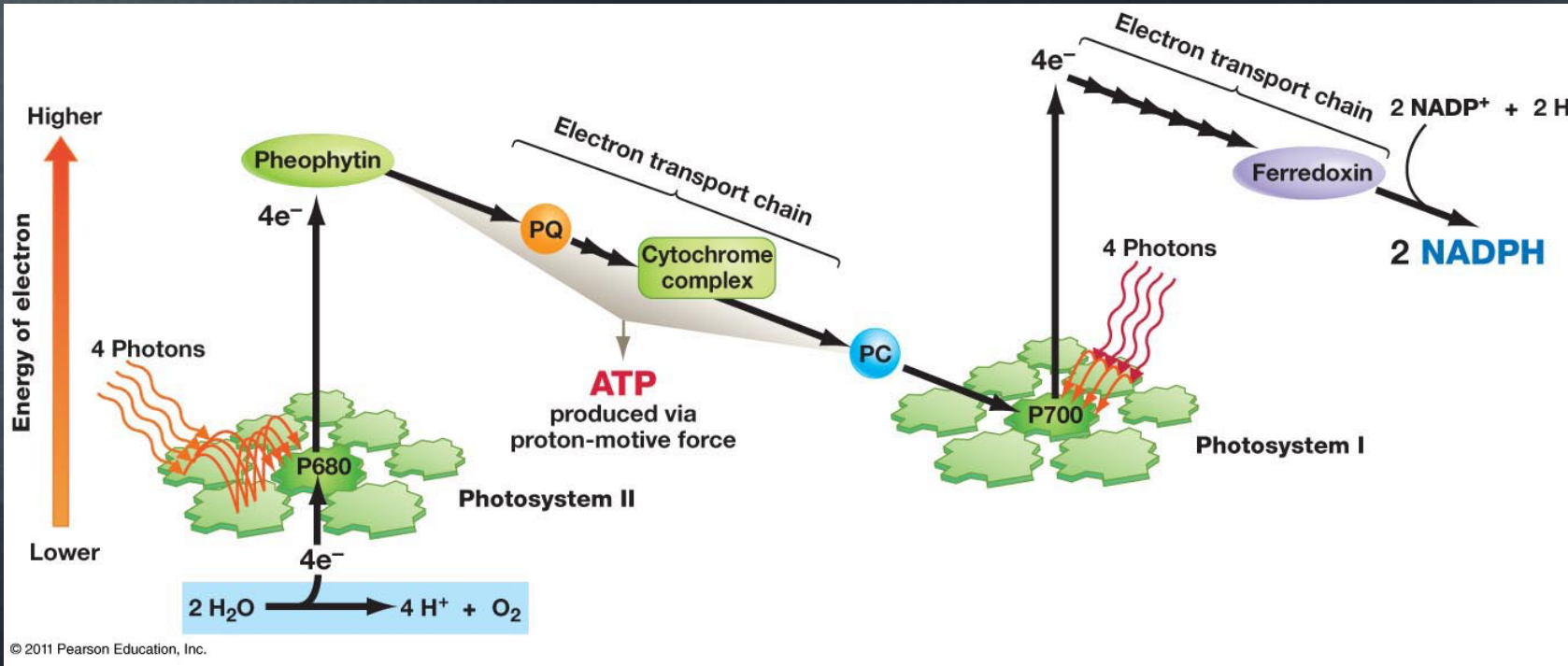


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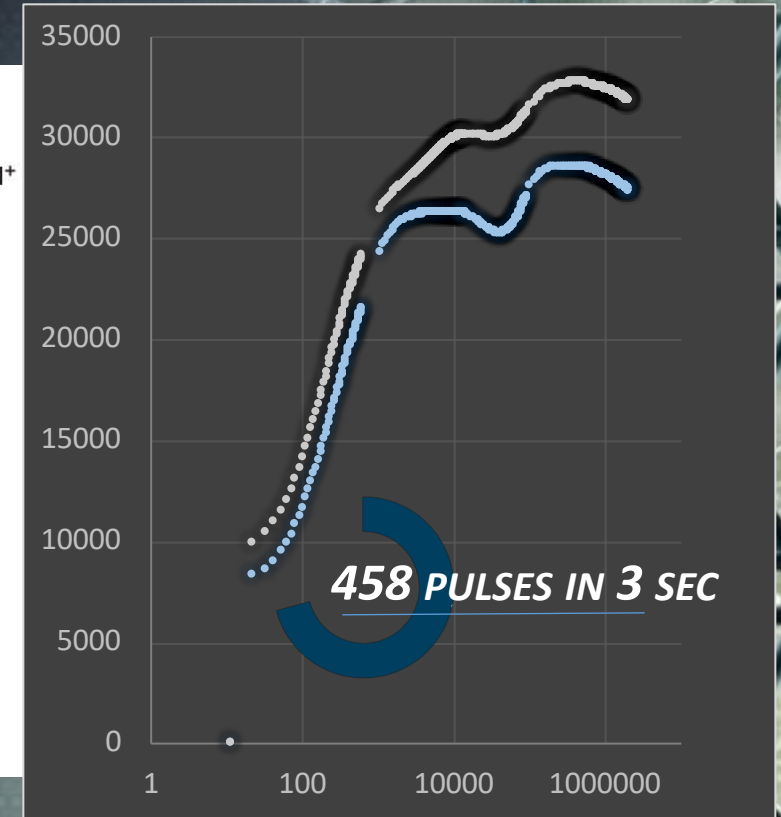
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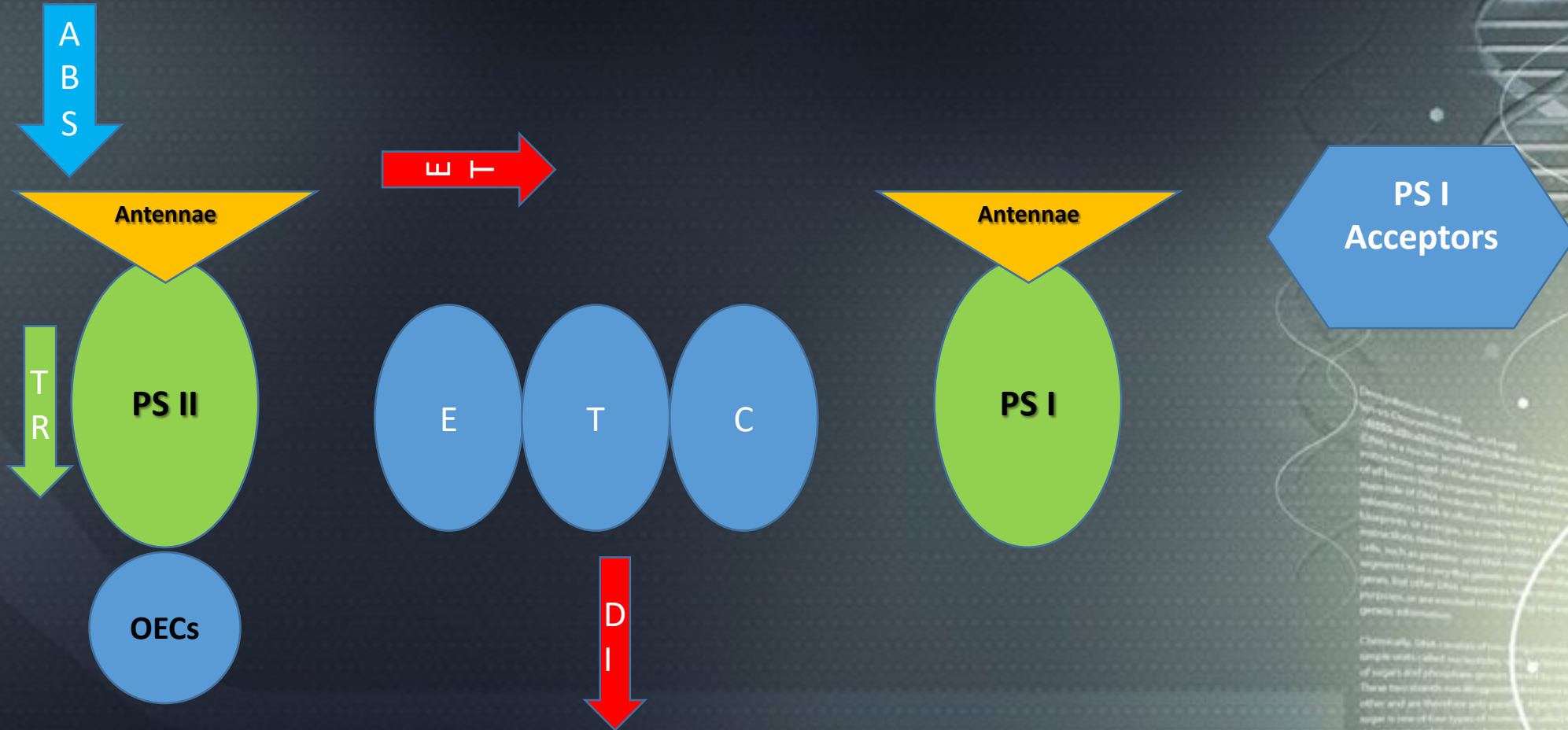


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PULSE AMPLITUDE MODULATED (PAM) FLUOROMETRY



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Chemically, DNA consists of long, unbranched chains of nucleotides called nucleic acids. Each nucleotide is composed of a phosphate group, a five-carbon sugar, and a nitrogenous base. The phosphate group is attached to the sugar, and the sugar is attached to the nitrogenous base. The phosphate group is attached to the sugar, and the sugar is attached to the nitrogenous base. The phosphate group is attached to the sugar, and the sugar is attached to the nitrogenous base.



INHIBITORY CONCENTRATION (IC50)

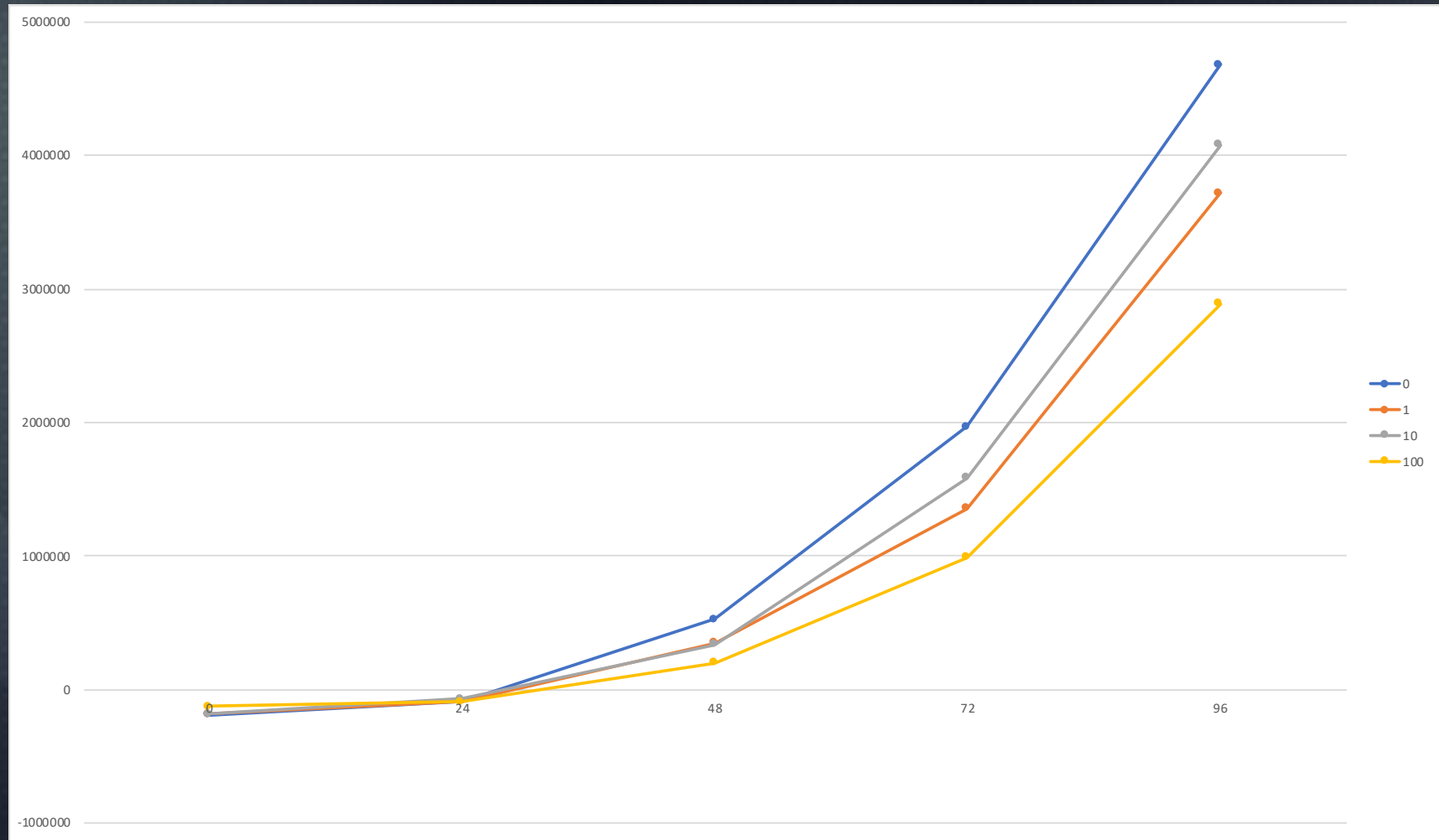
THE HALF MAXIMAL INHIBITORY CONCENTRATION (IC50) VALUE DETERMINATION: THE HALF MAXIMAL INHIBITORY CONCENTRATION IS A MEASURE OF THE EFFECTIVENESS OF A COMPOUND IN INHIBITING BIOCHEMICAL PROCESSES AND BIOLOGICAL FUNCTIONS.

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PROTOCOLO

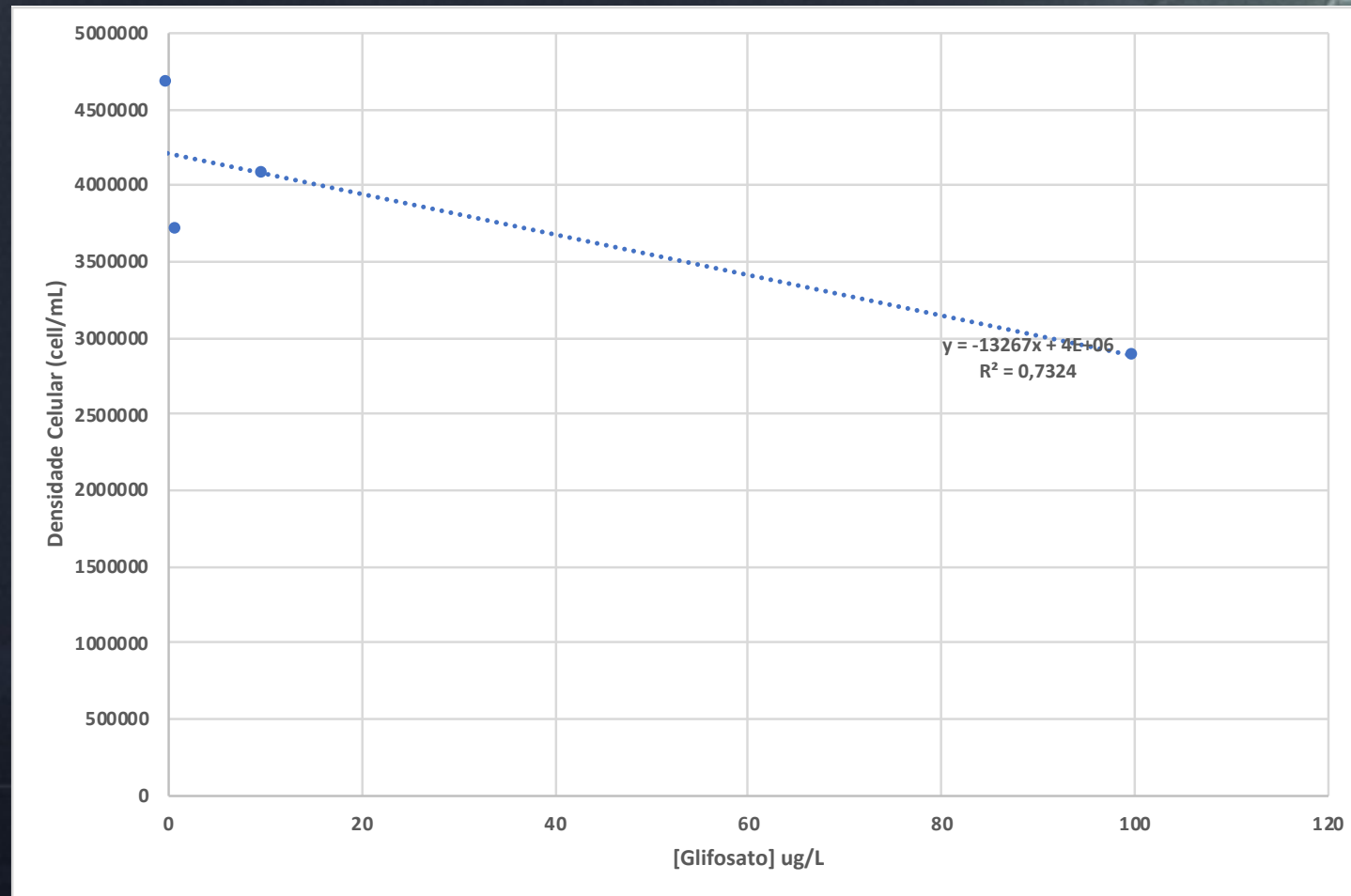
1. *AVALIAR A CONCENTRAÇÃO DE CÉLULAS ATRAVÉS DO PARÂMETRO FT*
2. *AVALIAR O ESTADO FISIOLÓGICO DAS CÉLULAS ATRAVÉS DO PROTOCOLO OJIP*
3. *CALCULAR OS VALORES DE IC50 PARA O CRESCIMENTO CELULAR TENDO EM CONTA AS DOSES DE GLIFOSATO APLICADAS.*

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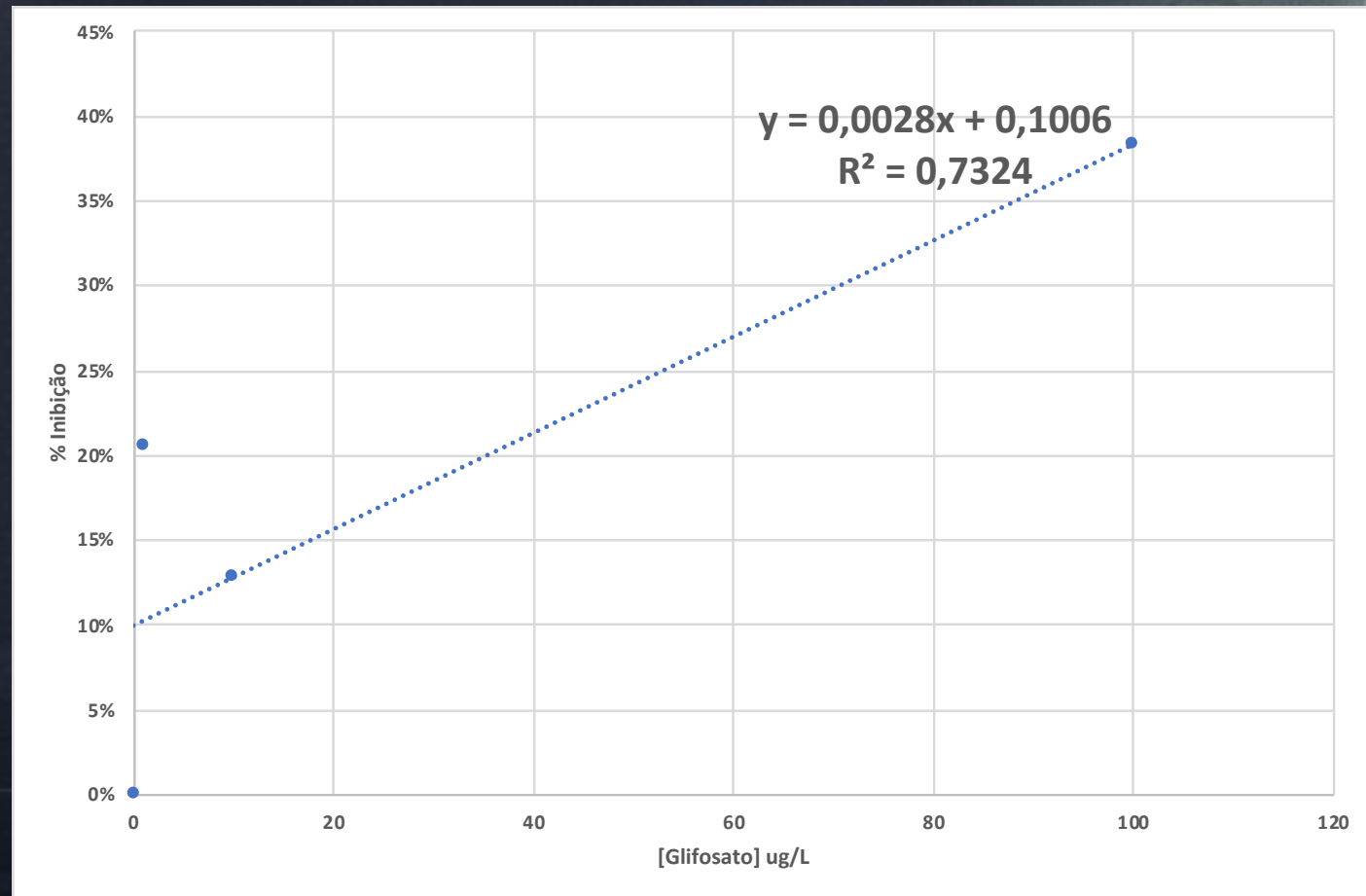


random][pLasatd

[Glif] ug/L	Nº Cel / mL
0	4681650
1	3718101
10	4081575
100	2888283

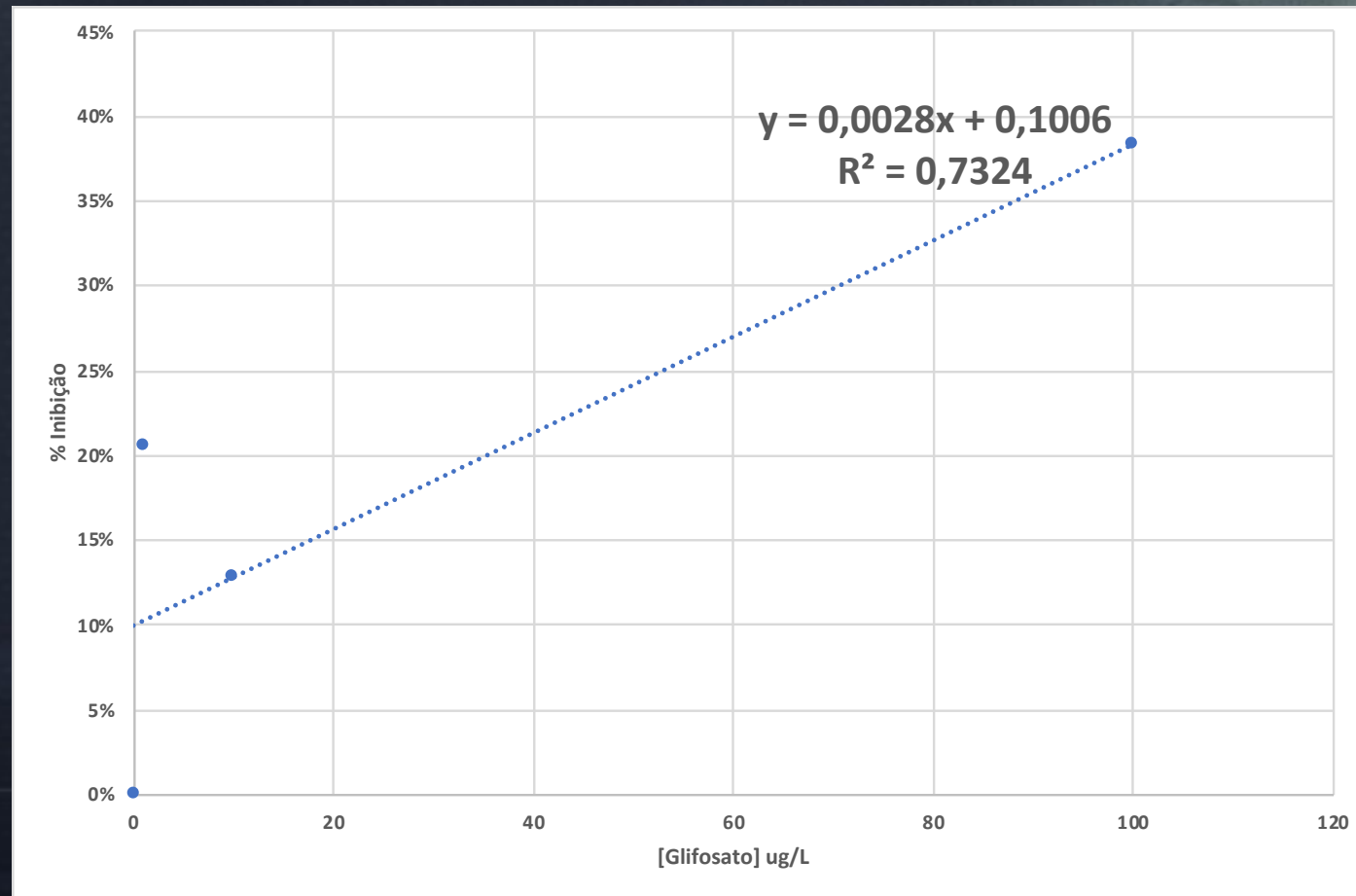


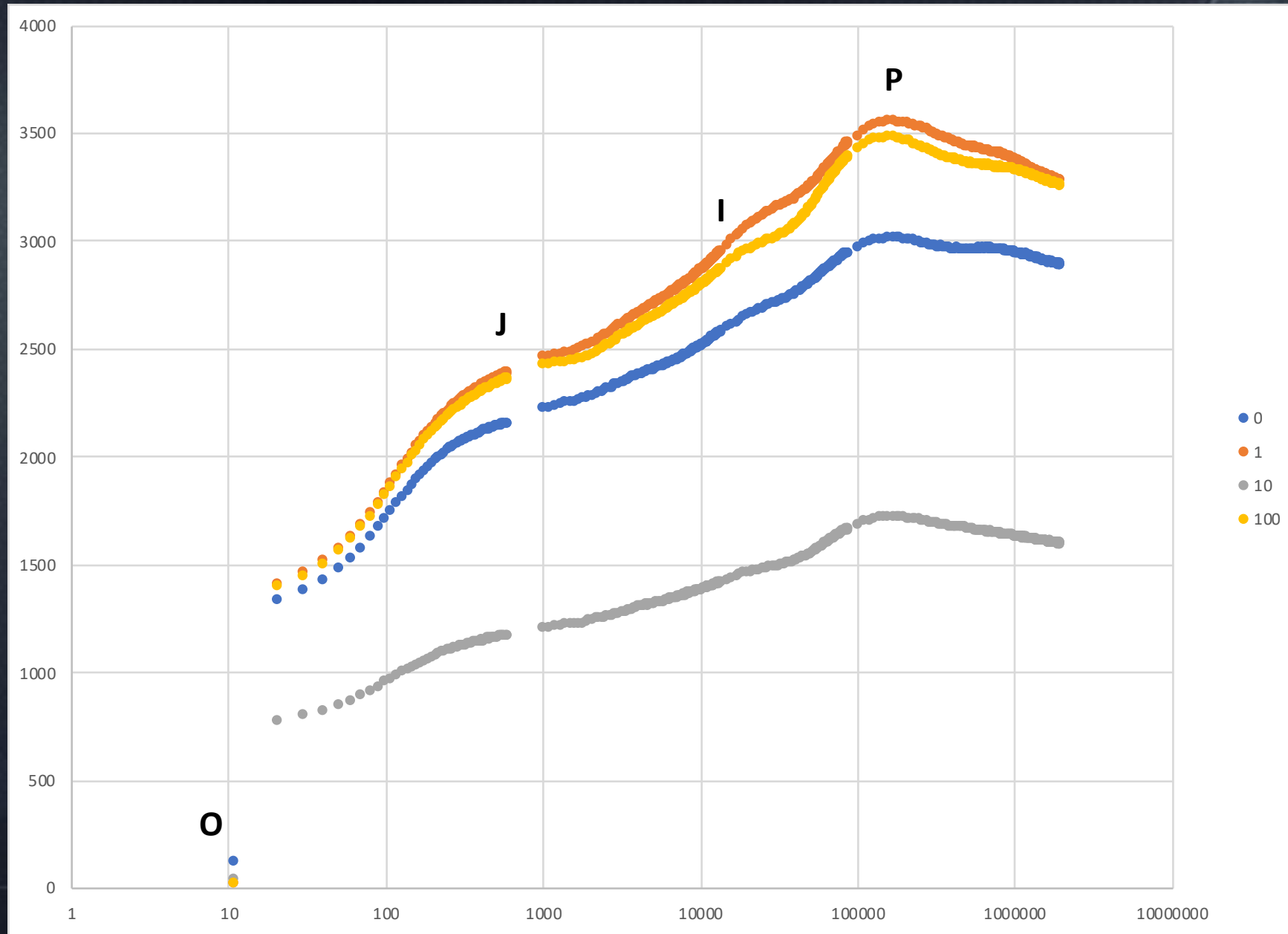
[Glif] ug/L	Nº Cel / mL	% inibição
0	4681650	0%
1	3718101	21%
10	4081575	13%
100	2888283	38%

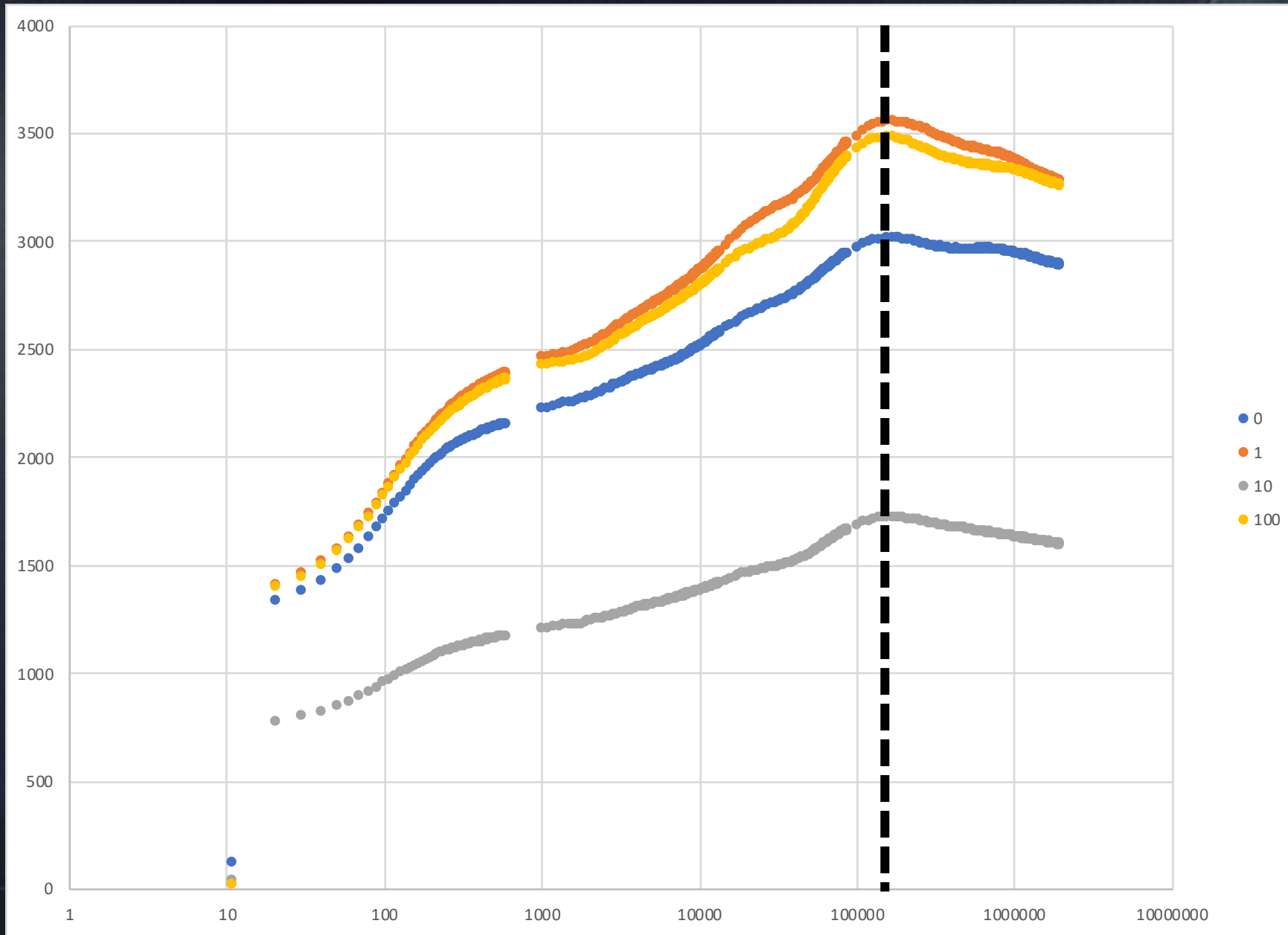


[Glif] ug/L	Nº Cel / mL	% inibição
0	4681650	0%
1	3718101	21%
10	4081575	13%
100	2888283	38%

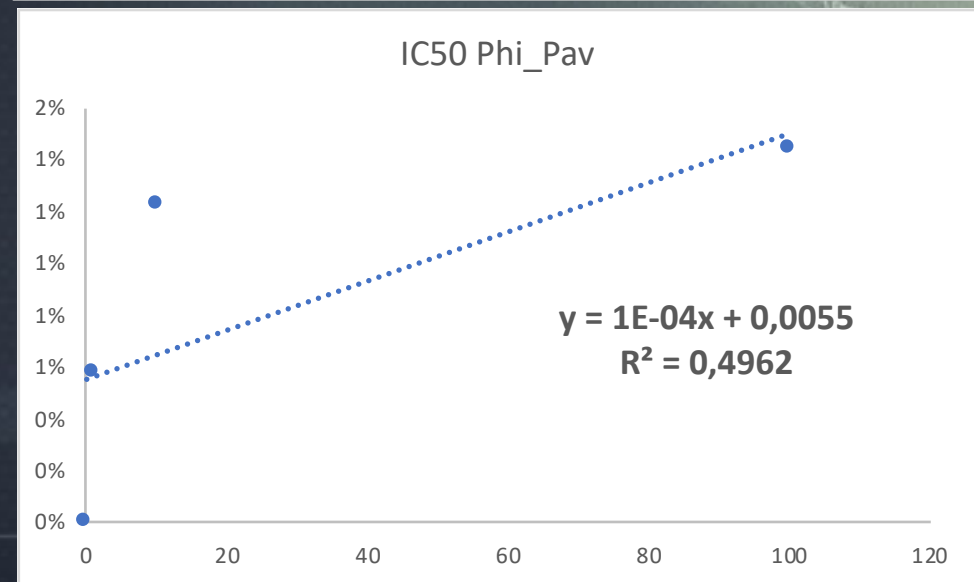
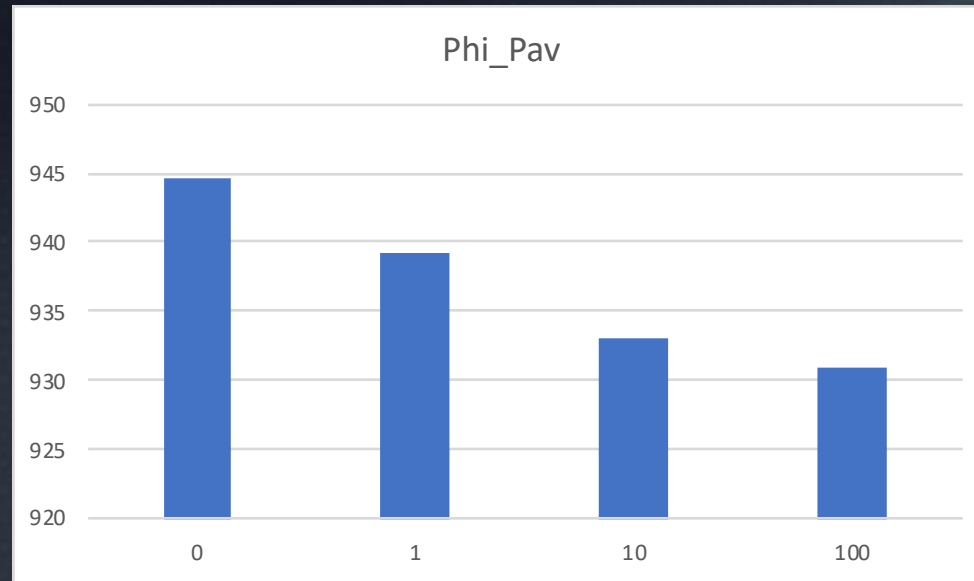
IC50= 142,6 ug/L





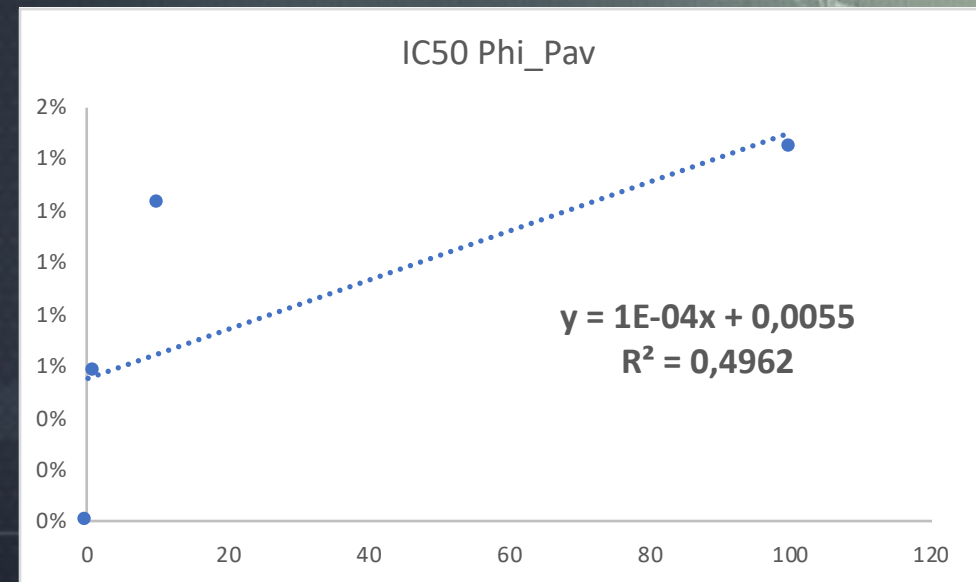
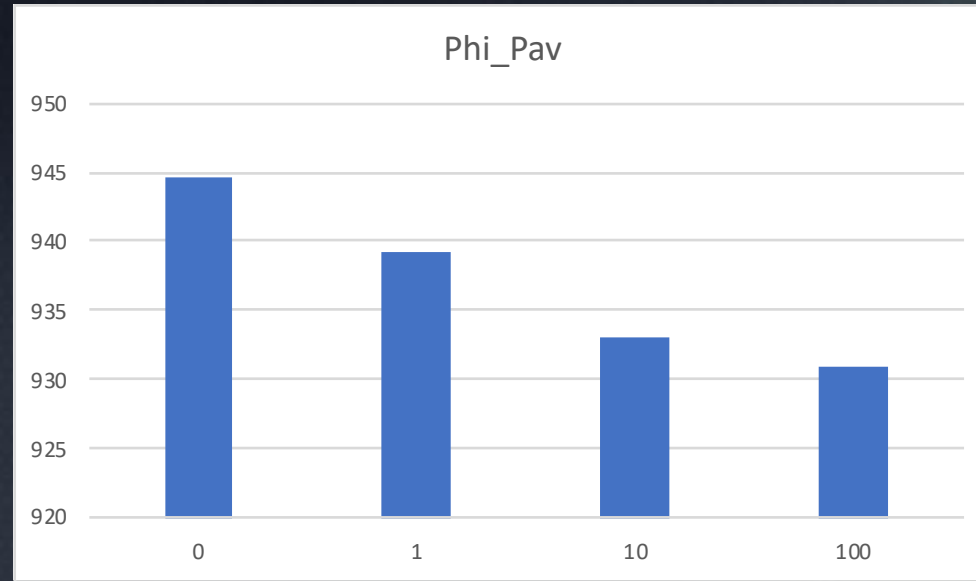


[Glif] ug/L	Phi_Pav	%inib
0	944,646	0%
1	939,147	1%
10	933,041	1%
100	931,015	1%

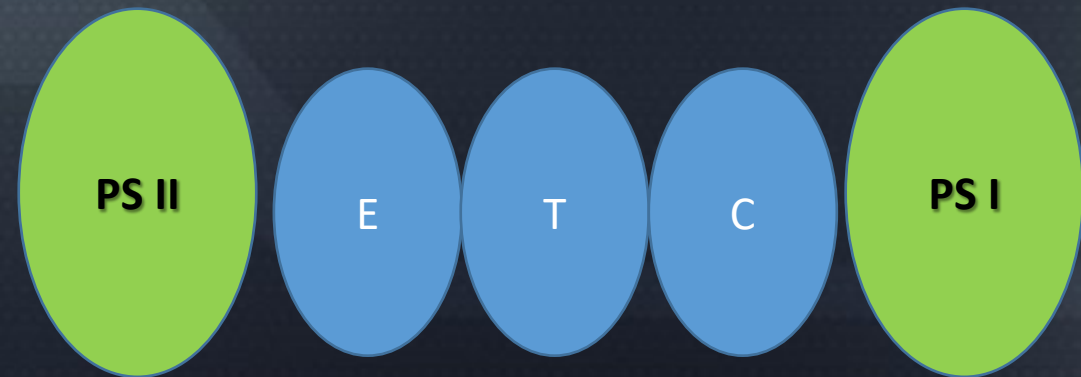
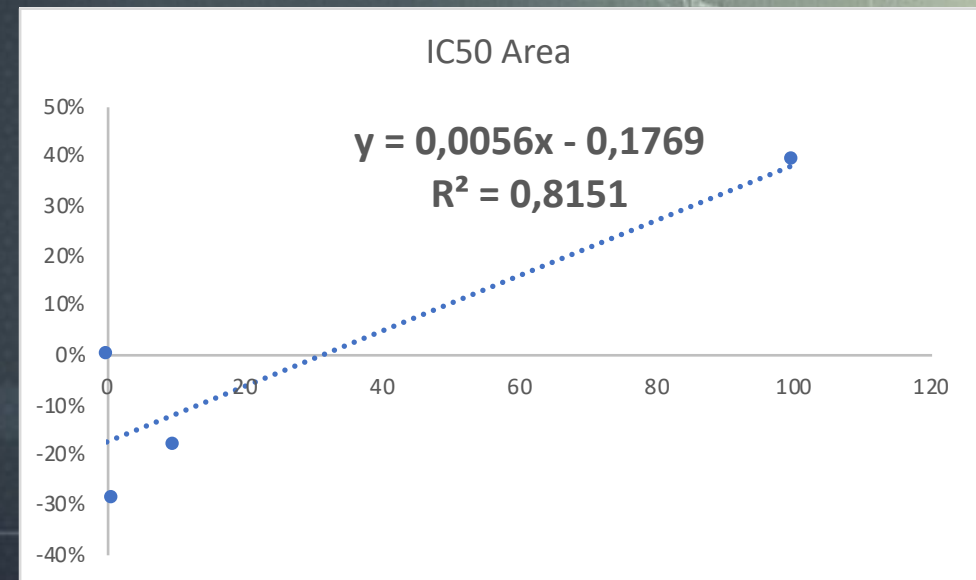
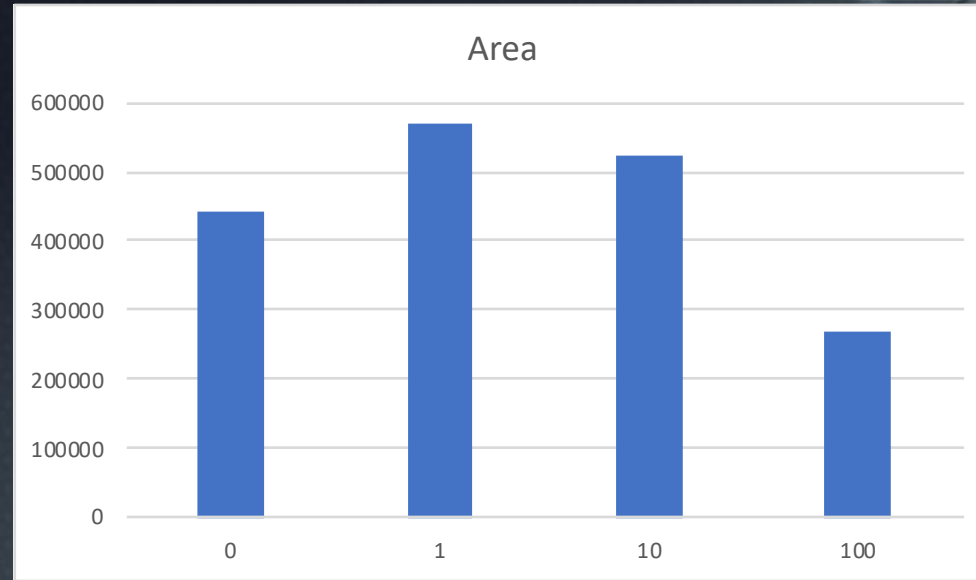


[Glif] ug/L	Phi_Pav	%inib
0	944,646	0%
1	939,147	1%
10	933,041	1%
100	931,015	1%

IC50= 4945 ug/L

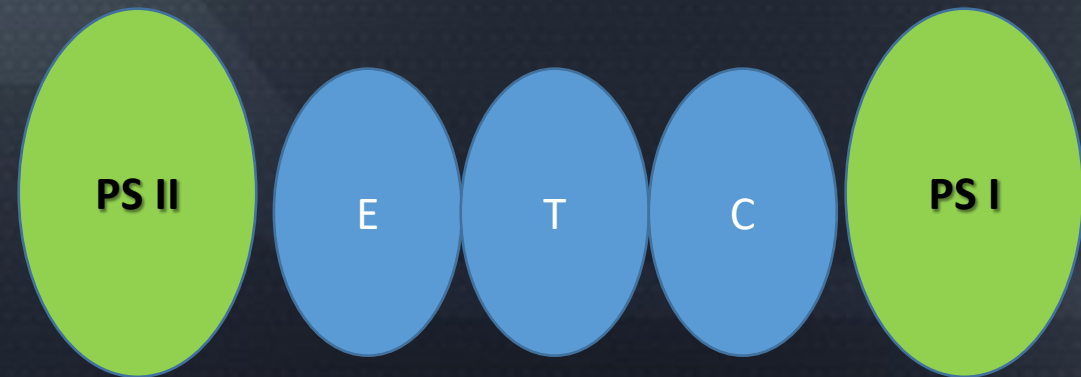
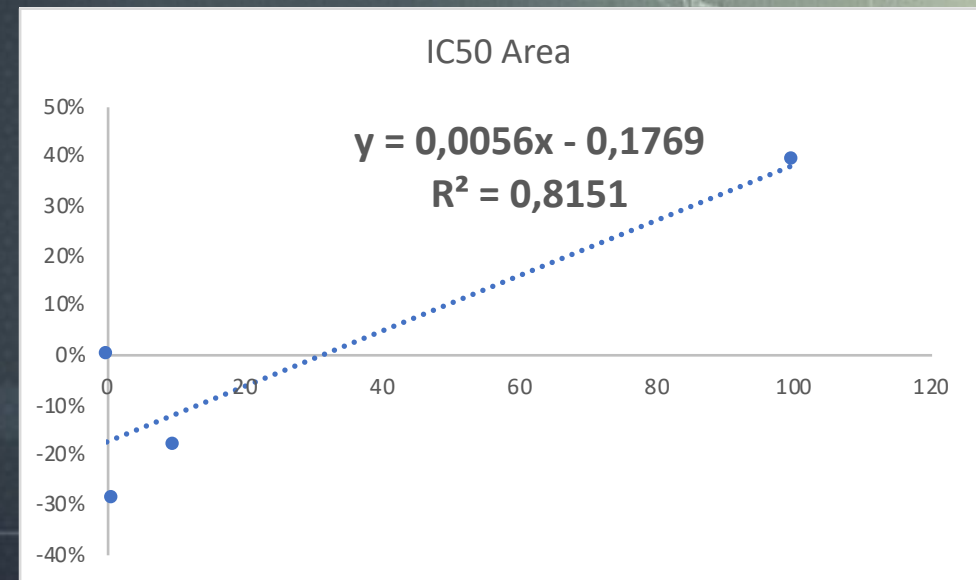
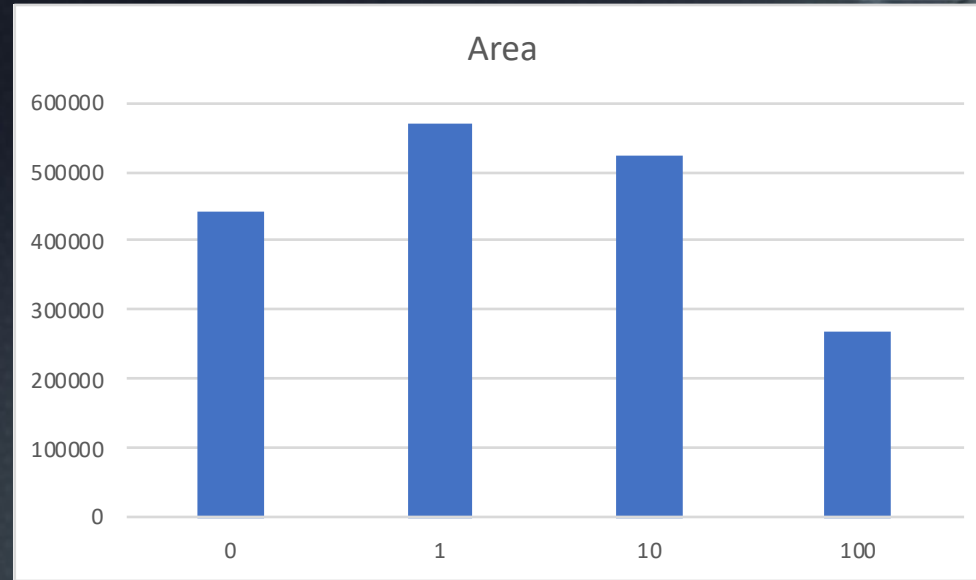


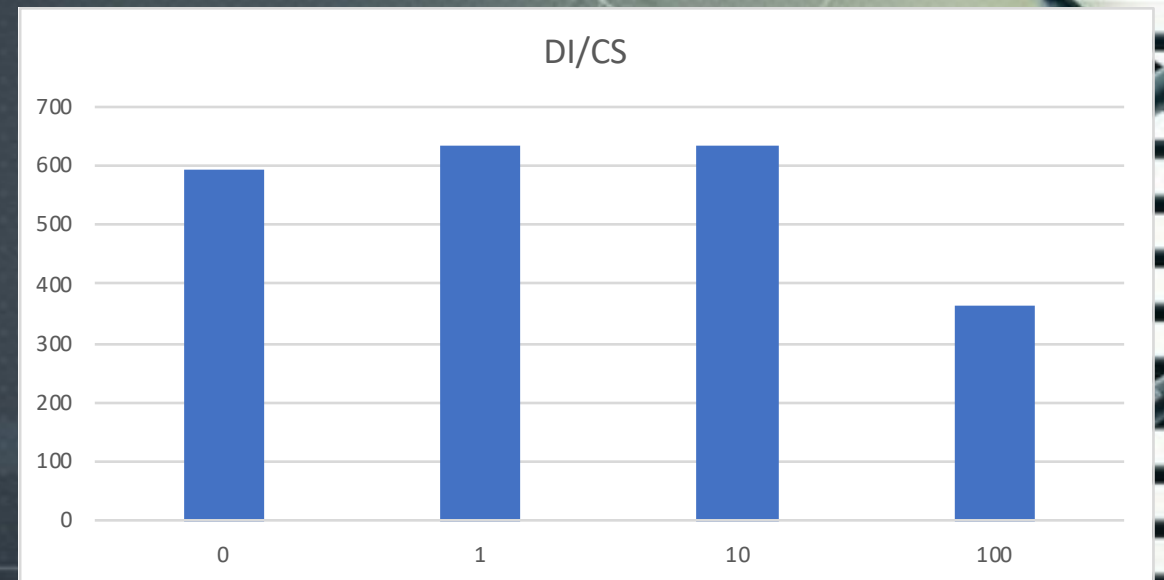
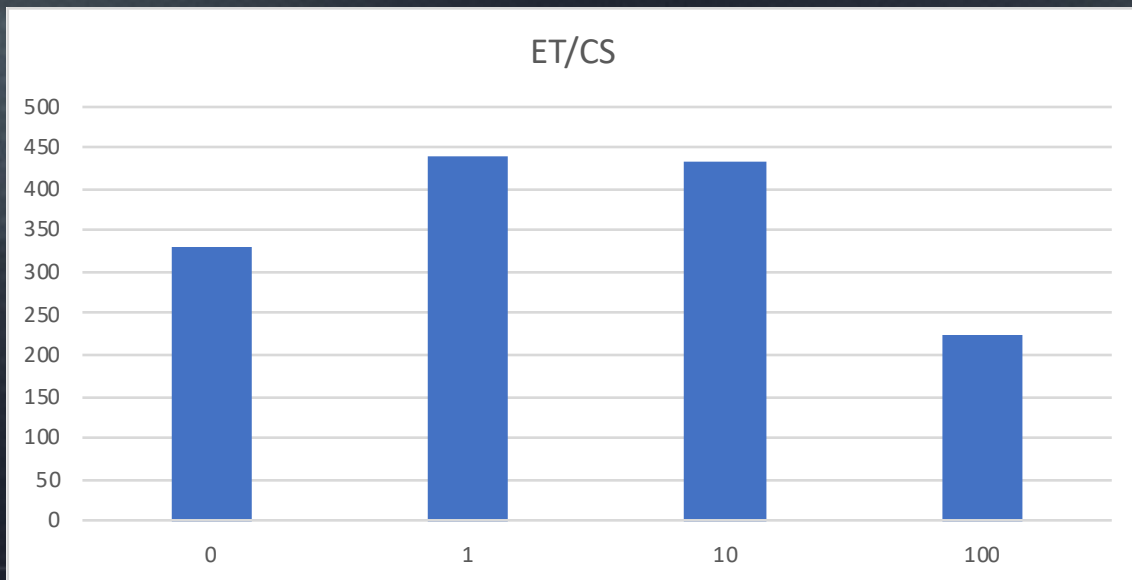
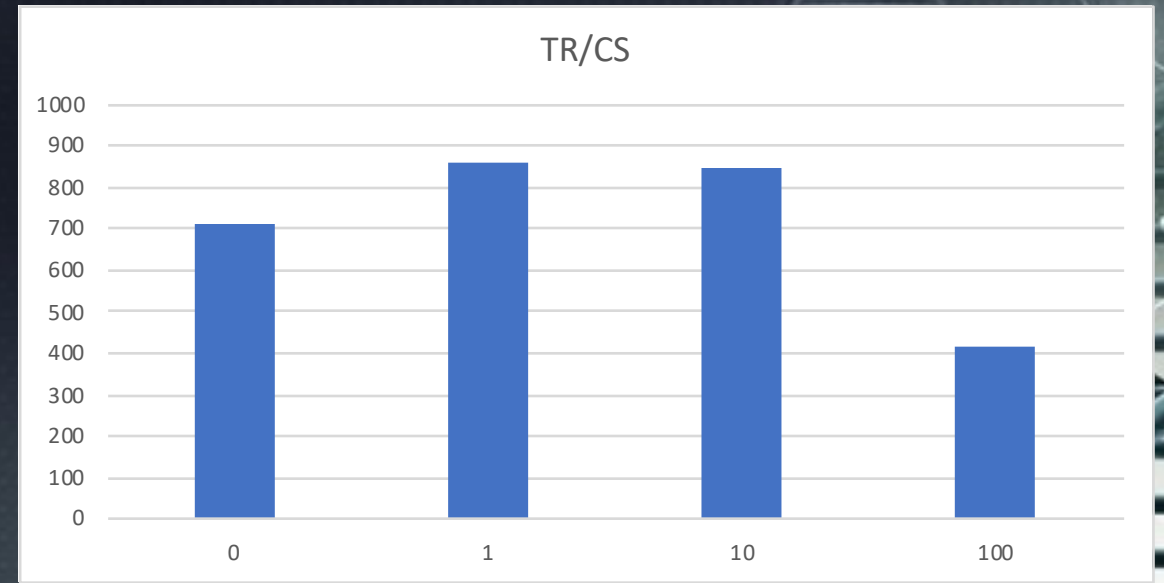
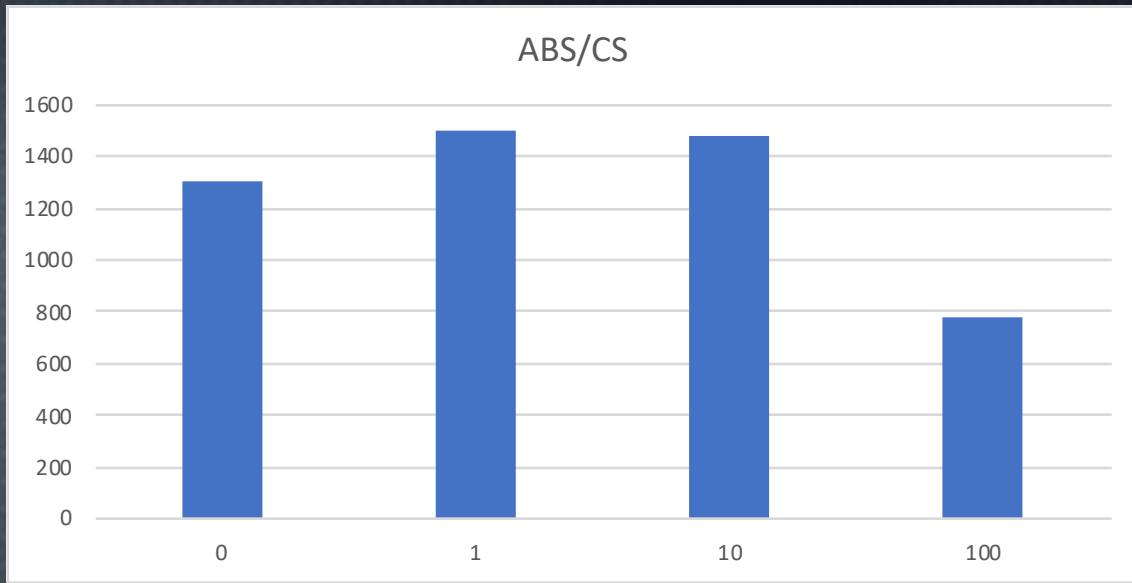
[Glif] ug/L	Area	%inib
0	440619	0%
1	569439	-29%
10	521764	-18%
100	268274	39%



[Glif] ug/L	Area	%inib
0	440619	0%
1	569439	-29%
10	521764	-18%
100	268274	39%

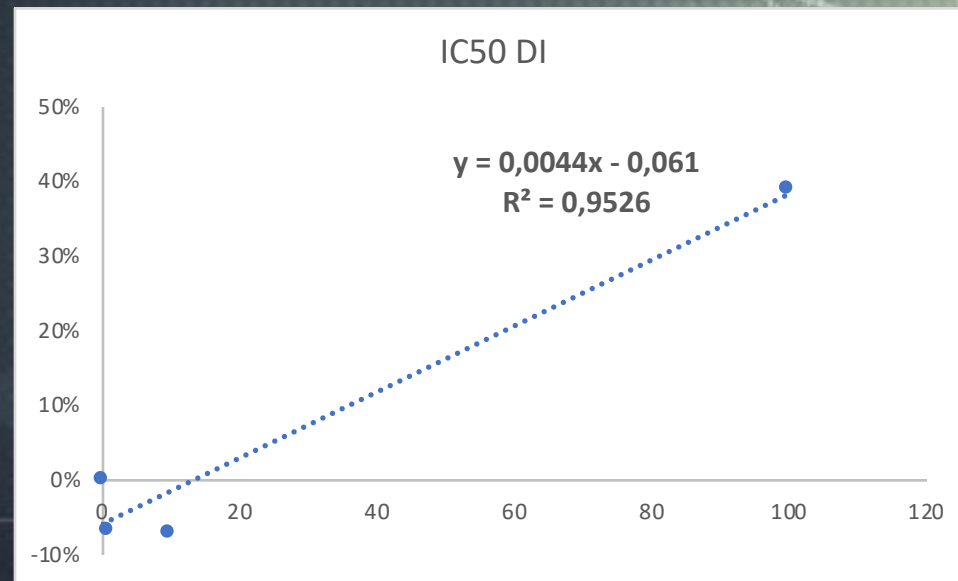
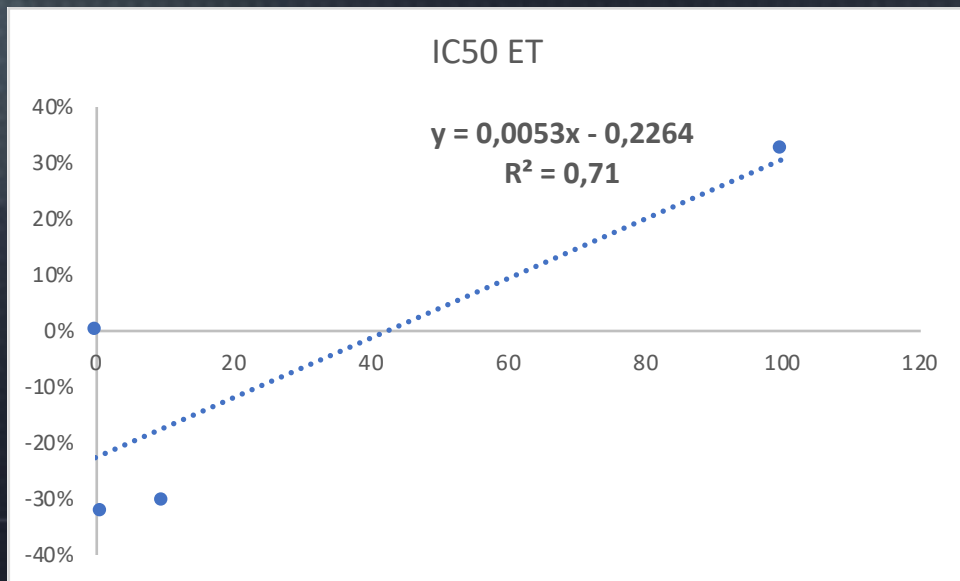
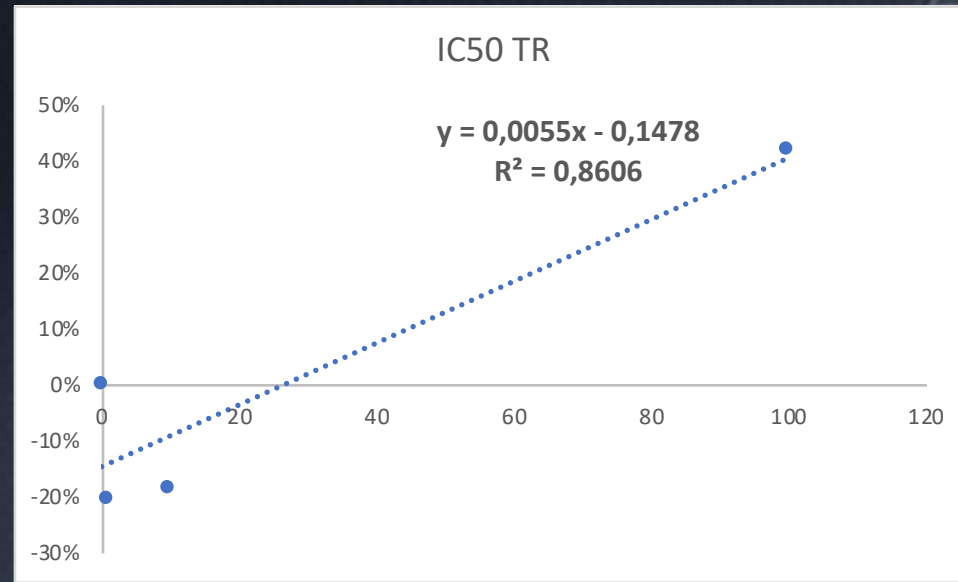
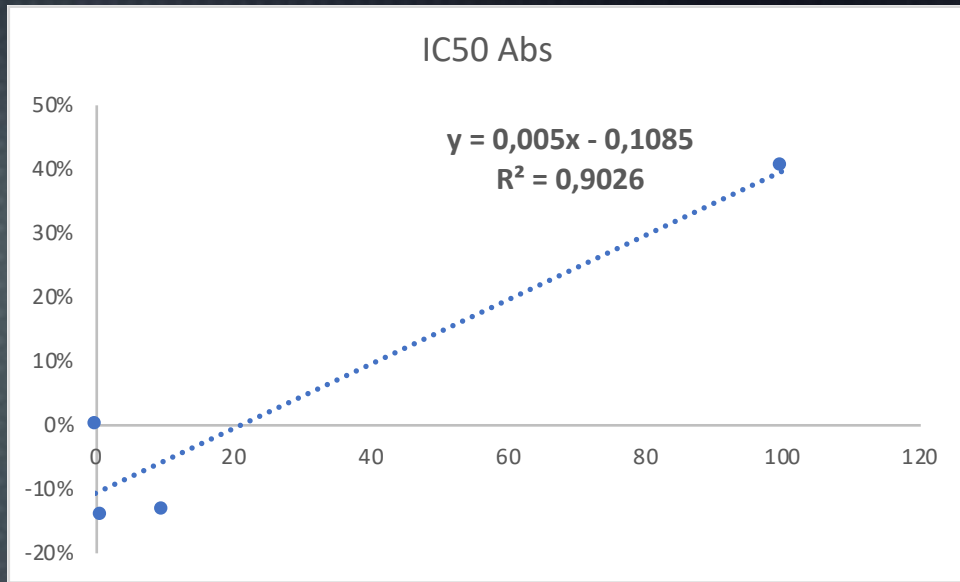
IC50= 120,9 ug/L



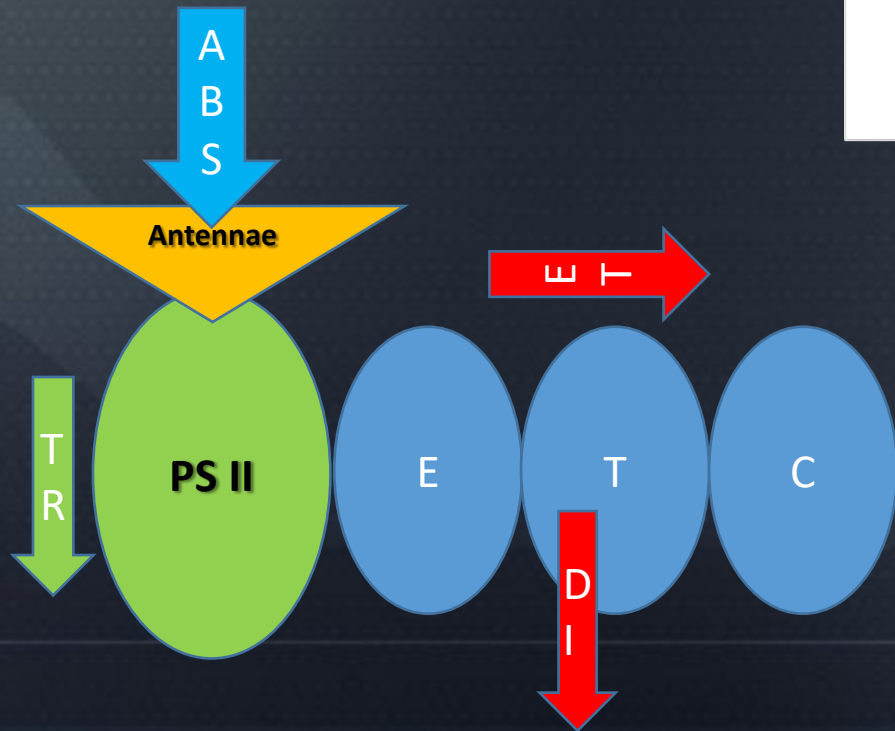
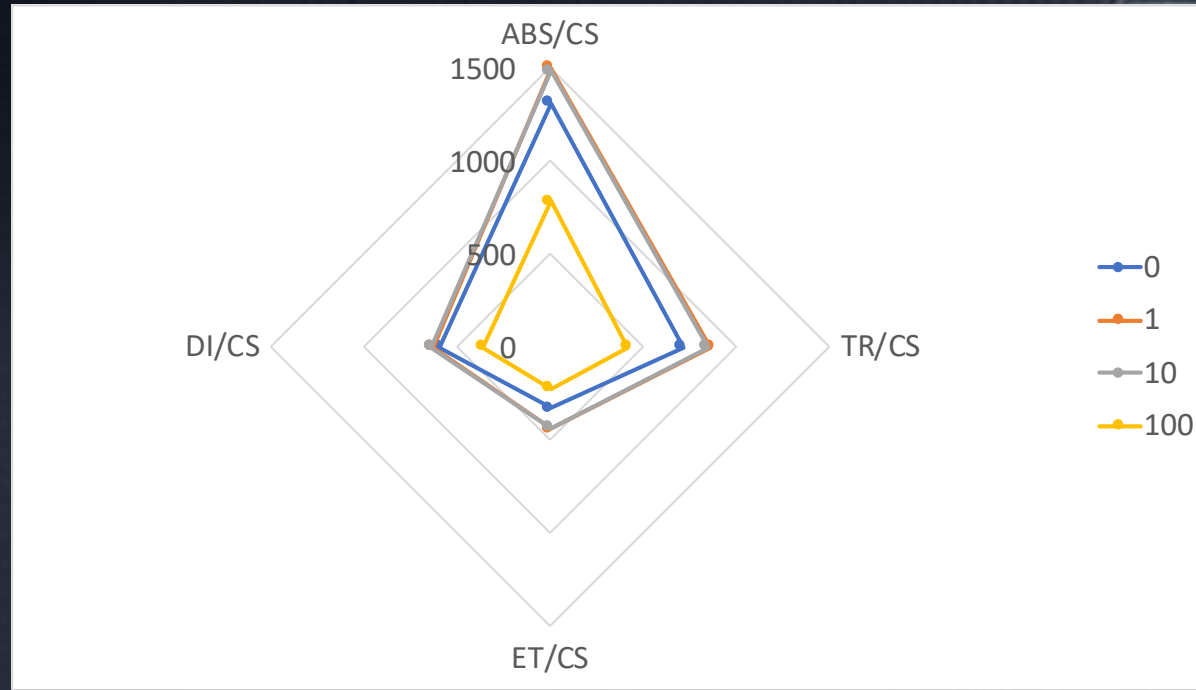


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Water cells, DNA is organized into large structures called chromosomes. These chromosomes are duplicated before cells divide in a process called mitosis. Eukaryotic organisms produce gametes (sperm and ova) through a process called meiosis. Meiosis produces four daughter cells, each with half the number of chromosomes as the parent cell. The daughter cells then fuse during fertilization to form a zygote with the full complement of chromosomes.



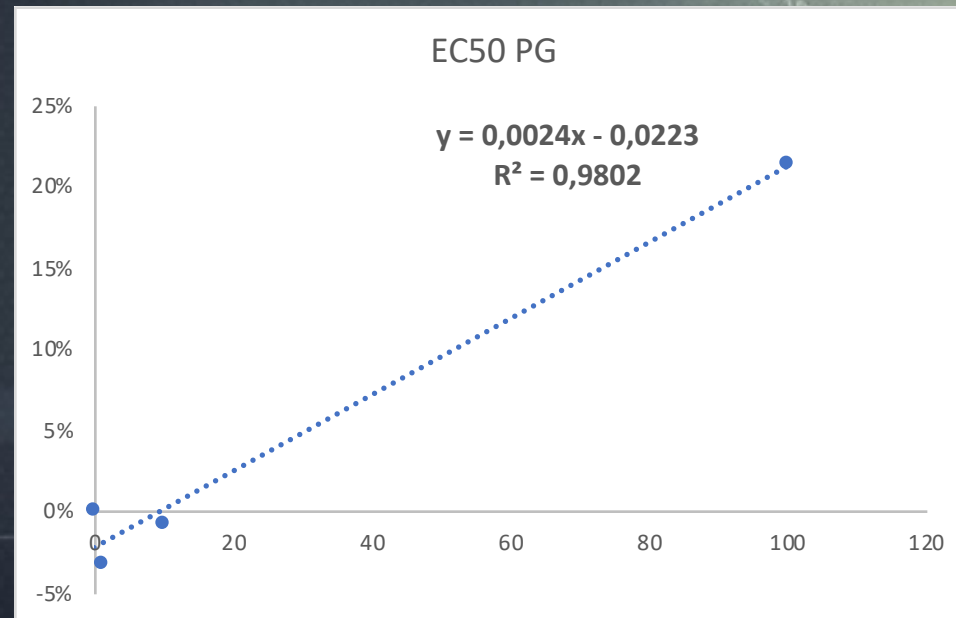
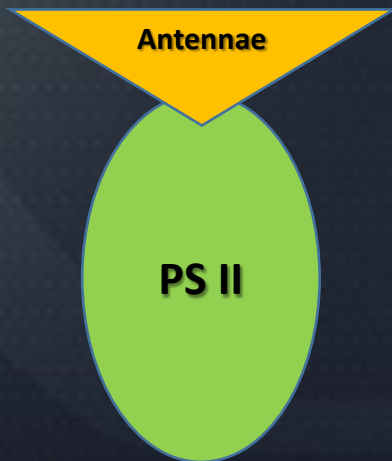
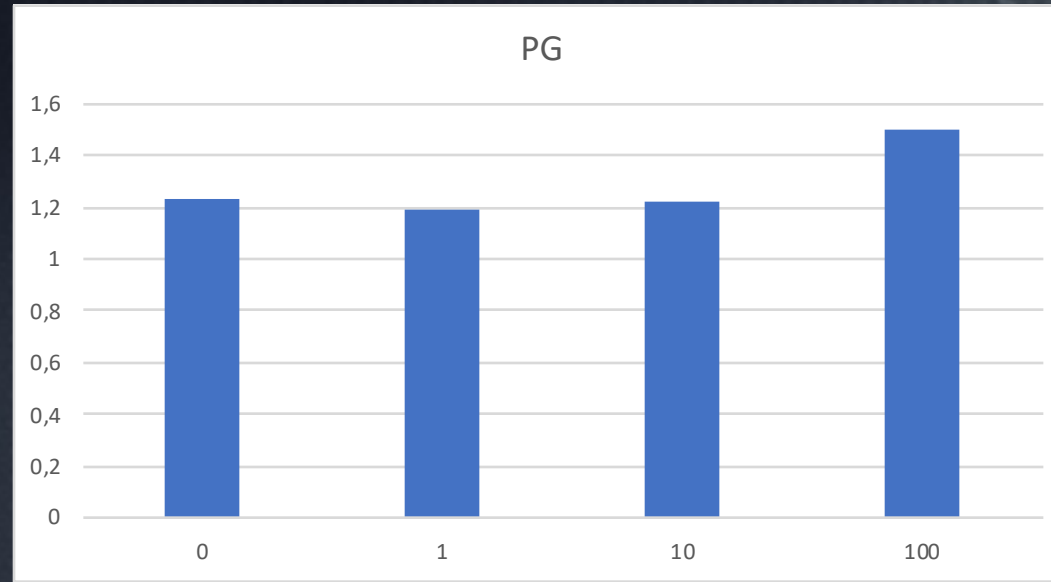
	IC50 (ug/L)
ABS	121,7
ET	117,782
TR	137,057
DI	127,5



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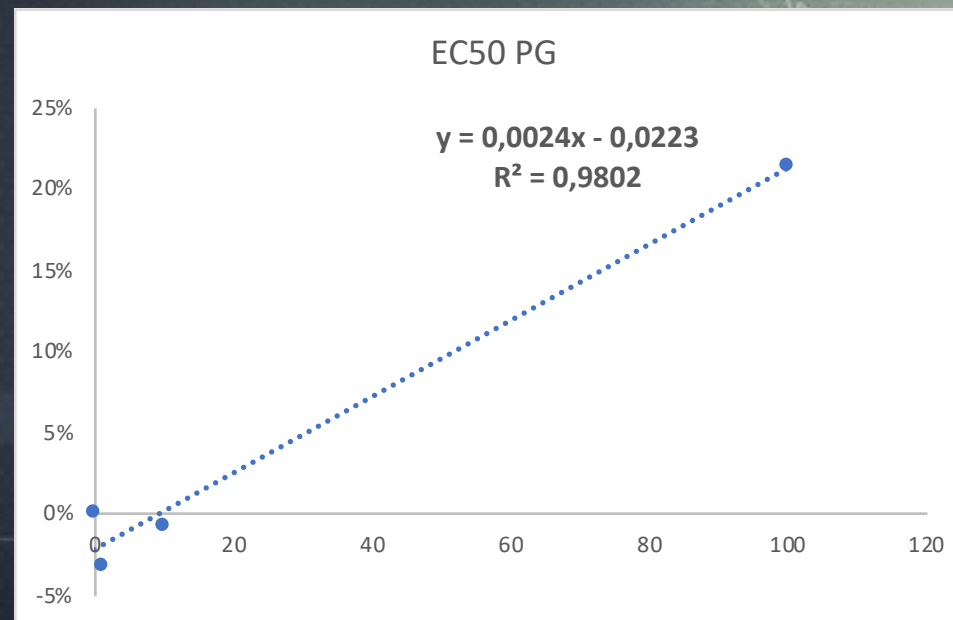
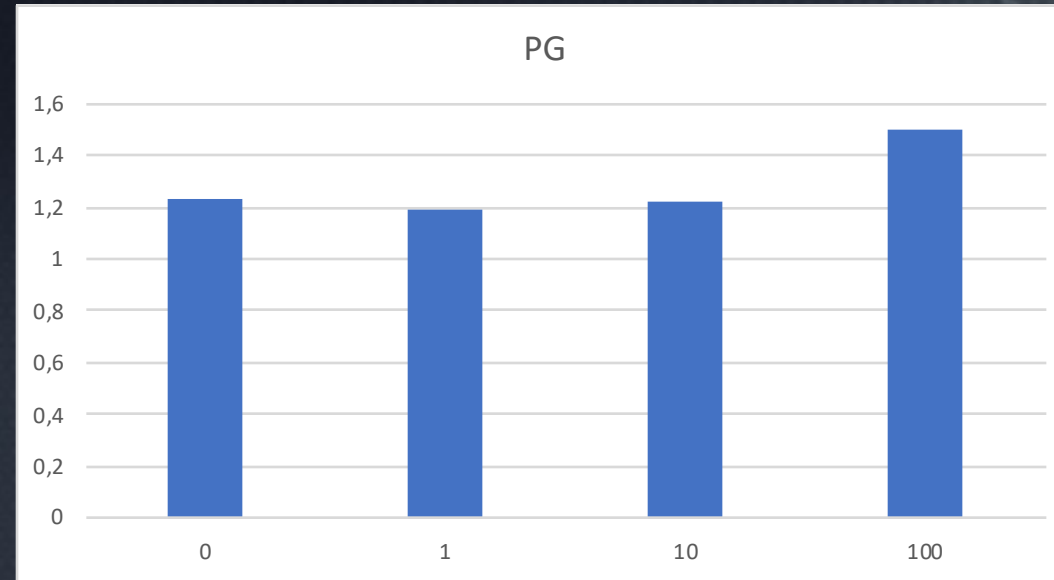
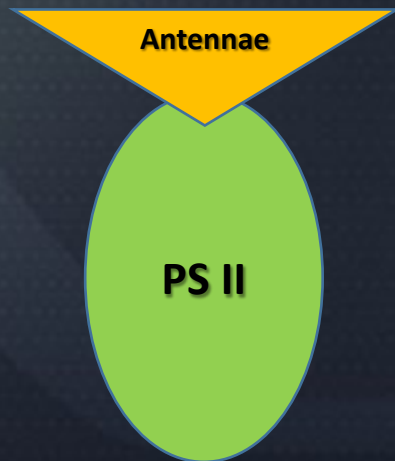


[Glif] ug/L	PG	%Enhanc
0	1,23174396	0%
1	1,19064228	-3%
10	1,22072997	-1%
100	1,49509889	21%



[Glif] ug/L	PG	%Enhanc
0	1,23174396	0%
1	1,19064228	-3%
10	1,22072997	-1%
100	1,49509889	21%

EC50= 217,6 ug/L



	IC50 (ug/L)
Crescimento	142,6 ug/L
Phi_Pav	4945 ug/L
Area	120,9 ug/L
ABS	121,7
ET	117,782
TR	137,057
DI	127,5



Chemically, DNA consists of two complementary strands of simple units called nucleotides. Each nucleotide is composed of a phosphate group, a five-carbon sugar, and a nitrogenous base. The phosphate group and the sugar are bonded together, and the sugar is bonded to the nitrogenous base. The phosphate group and the sugar are bonded together, and the sugar is bonded to the nitrogenous base. The phosphate group and the sugar are bonded together, and the sugar is bonded to the nitrogenous base.

When cells, DNA is organized into long molecules called chromosomes. These chromosomes are duplicated before cells divide. In a process called mitosis, eukaryotic organisms produce identical, diploid daughter cells. In a process called meiosis, eukaryotic organisms produce haploid gametes, which fuse during fertilization to form a diploid zygote. In prokaryotes, DNA is organized into a single circular chromosome. The DNA is attached to a protein called histone.

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