

WEIBER[®]



Carbon Di Oxide Incubator



Models:
(ACM HF Series)



Models:

- ACM HF Series

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include stable temperature control and increased security in the event of power failure (due to water's natural insulation abilities).

Material Of Construction

Most versatile for Biochemical Oxygen Demand determinations. Castor wheel mounted cabinet is double walled with inner chamber of Stainless steel sheet of grade SS 304 and outer wall of heavy gauge PCRC steel. sheet duly degreased and pre treated with primers for rust proofing duly painted with attractive stove enamel or powder coated.

Temperature Range

5 Degree C above ambient to 60 degree C

Temperature Control

The temperature inside the CO₂ incubator is controlled by intelligent programmable temperature controller and indicator. This controller is based on the microcontroller nano watt technology and its ergonomic design suits for any specific requirement of the CO₂ Incubator like Datalogger facility, Thermal and DOT Matrix interface, direct dataload facility in computer office automation software like MS-Word

Introduction

Weiber Carbon Dioxide Incubator are designed to provide ideal tissue culturing conditions with high resistance to contamination. It gives control over contamination with simplicity of operation and reliable performance. It is useful for photosynthesis and other biological experiments in laboratory. These are aesthetically designed. Weiber CO₂ Incubators are used in biological experiments to allow growth of organisms in optimal conditions of temperature, carbon dioxide and humidity. Incubators are generally supplied in one of three configurations, air jacket, dry wall and water jacket. Air draft incubators are popular among larger-volume models designed to allow for quicker recovery times. Air draft (or forced draft) incubators circulate air throughout the interior of the incubator to maintain constant temperatures. Dry wall incubators have the advantage that they can better adapt to ambient changes and require less maintenance. Water-jacketed incubators advantages

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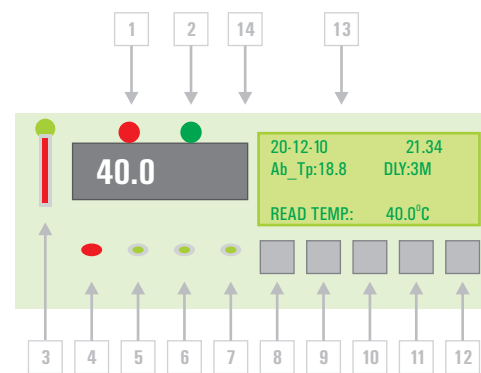
and Excel and many other features listed in the specification below. Carbon Dioxide can be provided inside the chamber through an inlet nozzle provided on the cabinet through a CO2 cylinder. The gas flow can be regulated by using flow control valve with CO2 regulator. Air can be admitted through nozzle fixed on the cabinet. Flowmeter to check the flow of CO2 and air compressor for air flow can also be supplied (optional).

Accurate Infrared CO2 Control System

The WEIBER® Carbon Di Oxide Incubator (Acm-22062-A) Incubator uses a microprocessor based, non-dispersive infrared CO2 sensor. The amount of energy diffused to the detector is an exact logarithmic function of the CO2 concentration in the gas between source and detector. The wavelengths used are absorbed by a filter in the CO2 bandwidth making the measurements insensitive to other components, such as water vapor. Advanced design provides

a very stable drift-free output requiring less frequent calibration. The sensor is within the chamber air plenum so very accurate CO2 control is achieved.

Interactive ergonomic Control Unit based on Microcontroller



1) **Heater Mode** : This LED indicates the heating system on condition and it light up when the set temperature is higher than the ambient temperature.

2) **Cooling Mode**: This LED indicates the cooling system on condition and it light up when the set temperature is lower than the ambient temperature.

3) **Temperature Alarm**: This LED indicated the extreme Ambient condition and the temperature failure condition.

4) **Audio Alarm** : This Alarm indicates the visual alarm and indicates any failure and Temperature overshoot conditions.

5) **Door Open** : Visual indication with door open conditions.

6) **A.C Power failure** : This visual indicator light up when the mains power fail and the system working in the battery mode.

7) **Low battery indicator** : This LED indicates the battery

backup status, This LED indicates when the battery charge capacity available at 25% of the total charge.

8) **UP** : Count up key.

9) **SET** : This is a set button to set any parameter on the screen, by pressing of this key a cursor blink on the corresponding parameter, So you can select any desired parameter and use UP and Down key to set specific value/setting.

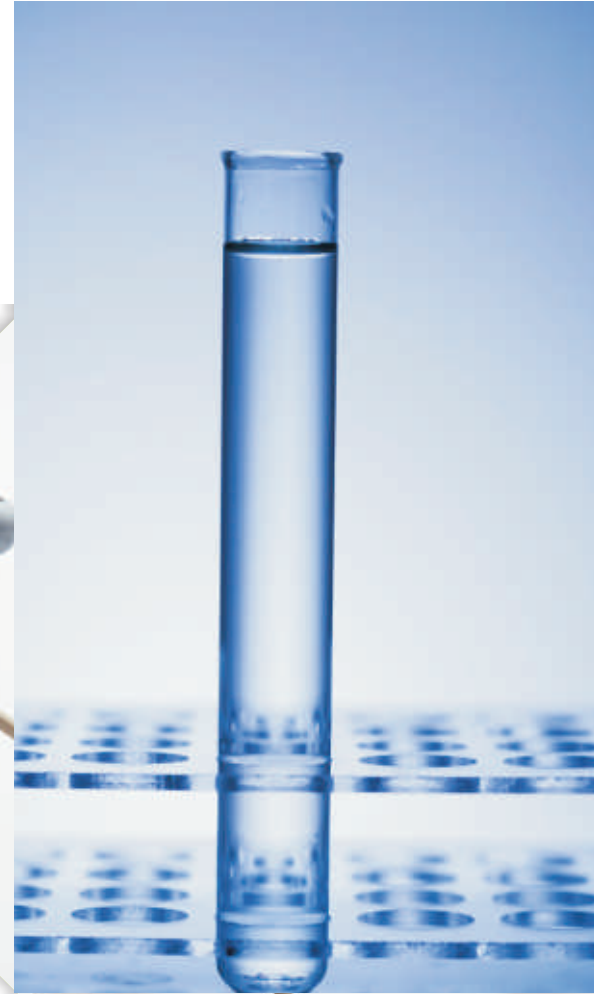
10) **Down** : Down count key.

11) **ESC** : This key is used to exit from any menu, you are working right now.

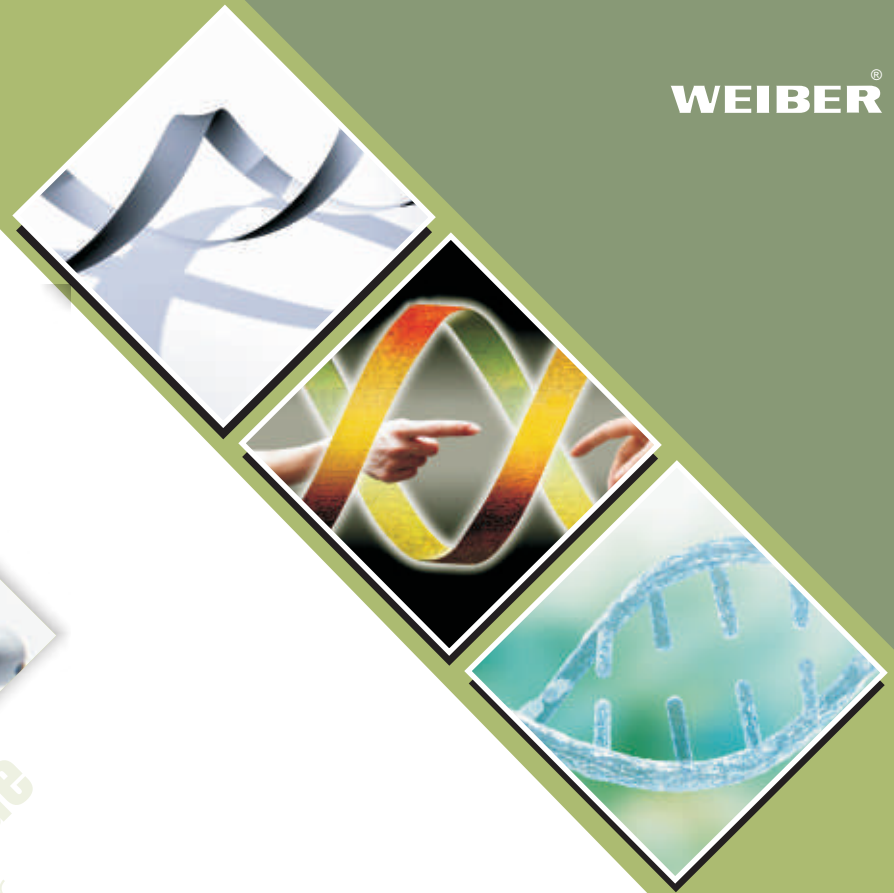
12) **Print/Data download** : This key is used to transfer the stored data into the printer or Data download facility in the computer MS Excel/Word and Hyperterminal software.



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13) **Display Unit** : This unit is a user interactive interface system for easy operation and it displays the parameter like DATE, TIME, Ambient Temperature, Compressor ON Delay Time, Read and Set Temperature.

14) **Temperature Display** : This seven segment display indicates the read temperature value inside the chamber.

SYSTEM SETTING

1) **DATE and TIME** : From normal operational mode, press SET key ones,

The cursor blinks at

DATE (20), and for second press of KEY SET the cursor blinks at MONTH (12), and similarly on Third press of key SET cursor

blinks at YEAR and repeat the steps to move to any parameter. Similary you move cursor on any parameter and set desired value for system operation., To increase any parameter use UP key and to decrease any parameter use DOWN key.

After completion of all correct setting press ESC key to return back to the main menu.

Optional Features : (Can Be incorporated At Extra Cost If Desired)

XXIII. Temperature set point controls relays for refrigeration compressor and evaporator fan

XXIV. Relays rated min. 200VAC:
a. Compressor: min. 8 A, min. 60 LRA
b. Fan: min. 4 A

20-12-07	21.34
	DLY:3M

c. B) High/low temp alarm

XXV. Audio and Visual Alarm. Programmable

XXVI. Alarm mute w/ ring back in 5 minutes

XXVII. Touch Button Control for Alarm Mute/Ring Back.

XXVIII. Keyed alarm silence switch

XXIX. External Keyed Alarm Mute. Alternate: Supervisor programmable code

XXX. Door Buzzer alarm

XXXI. IR Sensor/ Micro Switch Based Door open Alarm. Adjustable or fixed 30s delay before alarm

XXXII. Power failure alarm: Automatic Power detection and Audio Visual Alarm. Adjustable or fixed 15 min delay before alarm

XXXIII. Programmable temp range: Touch Button Control to Program Temperature. User Settable.

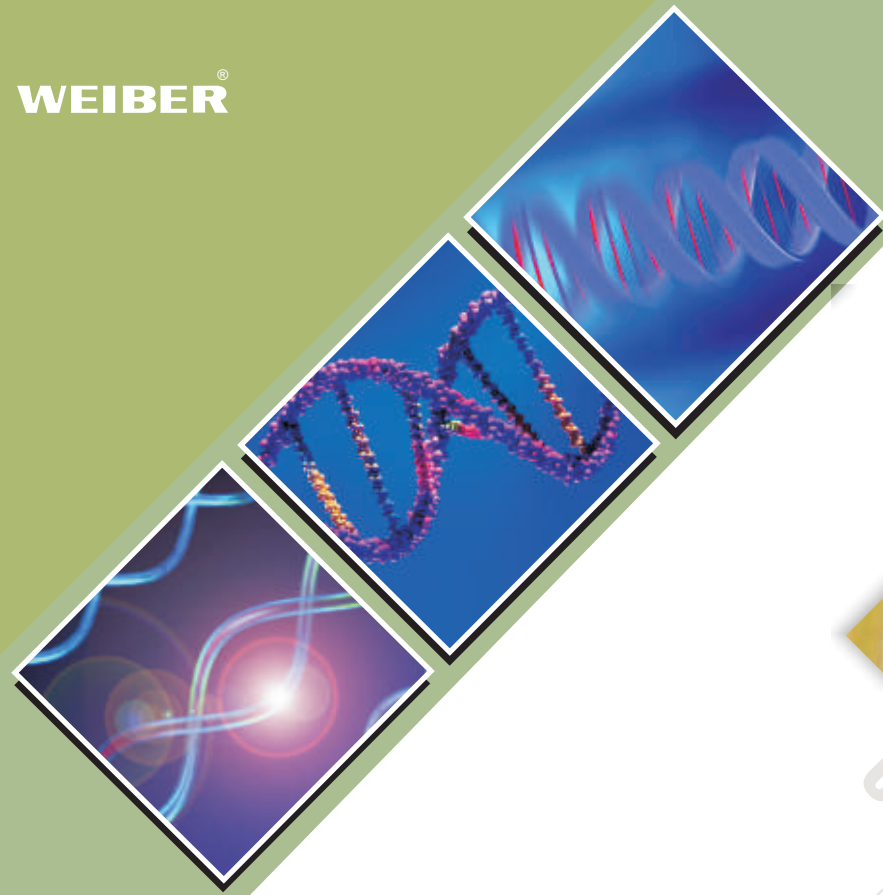
XXXIV. Battery backup: Automatic Battery Charging Facility inbuilt in circuit. Provides up to 24 hr of display power

XXXV. Mounted temp probe
XXXVI. Dual PT-100 sensor With Ambient Sensing by Semiconductor Temperature Sensor. Set point display (program mode) LCD and Segment

XXXVII. Dry contacts(Remote Control) for central alarming.

XXXVIII. R.F based Remote Alarm System

XXXIX. Built-in chart recorder/Thermal Printer standard for blood bank units or data acquisition in the controller memory which can be down loaded on a computer through a suitable world standard interface like RS232 and/or RS485.



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XL. RS-232 I/O Port Provided,

XLI. Serial Thermal Printing facility.

XLII. 24 hr non-volatile temperature Record Storage Capacity, and Record Download facility in MS-WORD/Hyper terminal / MS-Excel.

XLIII. Up to 1 MB data storage Facility.

XLIV. Seven Day Profile Timer with Real Time Clock.

Insulation

The gap of 75 mm between the outer and the inner wall is filled with special grade glass wool to prevent thermal losses. Mineral Glass Wool Insulation : Glass mineral wool is one of the most environmentally friendly, stable and sustainable

insulants available. Glass wool is incombustible by nature. Euro class classification is A. It does not propagate flames and toxic smokes. Thanks to a dense entanglement of materials with a low conduction and trapping a great amount of air, glass wool is an excellent thermal insulant. The thicker it is, the better thermal resistance it has, thus reducing heat losses in our equipments for better sensitivity and economical operations. And its impact on the environment in manufacture, use and disposal is minimal.

Air circulation

Triple walled back of unit is fitted with two air circulation fans for maintaining temperature uniformly throughout the chamber

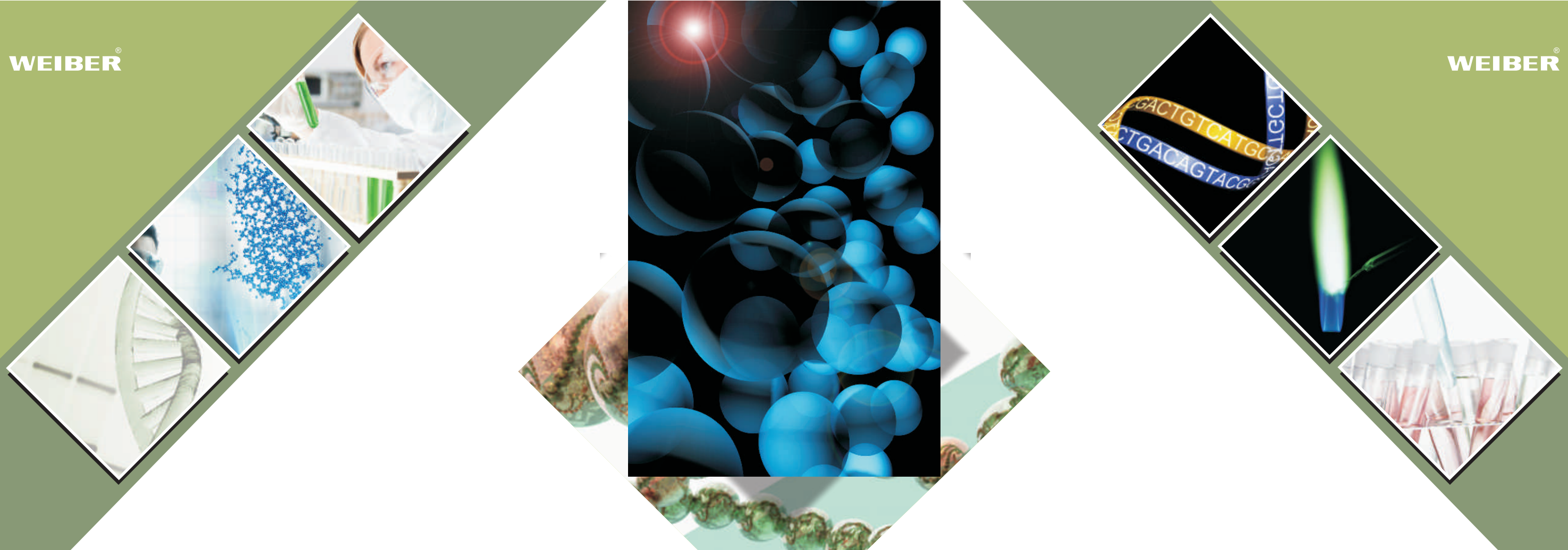
Features of Coaxial Circulation Fan:

- Vacuum impregnated stator winding with dr. back varnish under red baktol
- non-hygroscopic.
- Best IR value
- Bright bar (EN - 8 class) shaft.
- Bush bearing of branded companies.
- Surge comparison testing in fans and pumps eliminates into turn short circulating of the stator.
- Pressure die-casted-rotor manufactured with zero error.
- Boats of high accuracy

Doors

Full view inner glass/perspex door permits inspection of specimens, without disturbing the chamber temperature. Lock and Key arrangement is provided in the double walled outer door.

Illumination



Model	ACM HF 160	ACM HF 240
Interior Volume	151 Ltrs	240 Ltrs
Outer Dimensions (D x W x H)	762 mm x 637 mm x 909 mm	820 mm x 780 mm x 944 mm
Interior Dimensions (D x W x H)	530 mm x 470 mm x 607 mm	583 mm x 607 mm x 670 mm
Shelf Dimension (D x W)	455 mm x 423 mm	503 mm x 554 mm
Standard quantity of shelves	3	3
Maximum quantity of shelves	10	12
Temperature Setting Range	Ambient 5o C to 50o C	Ambient 5o C to 50o C
Temperature Setting Deviation	+/- 0.1o C	+/- 0.1o C
Temperature Sensor	PT 1000	PT 1000
Heating System	Air Jacketed, Direct Heating	
CO 2 Concentration setting range	0 - 20 %	0 - 20 %
CO 2 Concentration setting Deviation	+/- 0.1 %	+/- 0.1 %
Recovery time of CO2 concentration to 5% @ 37oC	Less than 3 minutes	Less than 3 minutes
CO2 Concentration Sensor	TCD (thermal conductivity detector)	
Humidity	> 95%	> 95%
Water Reservoir Volume	3 Litres	3 Litres
Interior Structure	3 standard shelves With 3 inner glass doors	3 standard shelves with a glass door 6 half-size shelves with 6 mini glass doors
Disinfection & time	Moist heat 9 hours @ 900 (disinfection duration: 25 hours)	
Net Weight	80 kg	98 kg
Rated Power supply	600w	735w
Power Supply	220V+ 10% / 50Hz (standard) 110V / 60Hz (optional)	



We are having **Representatives in 55 Countries**

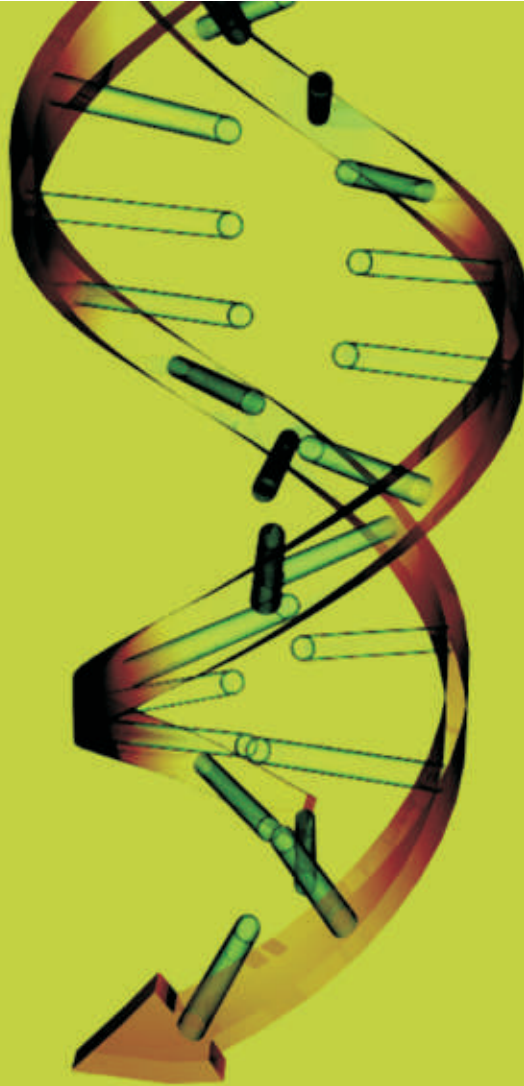
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