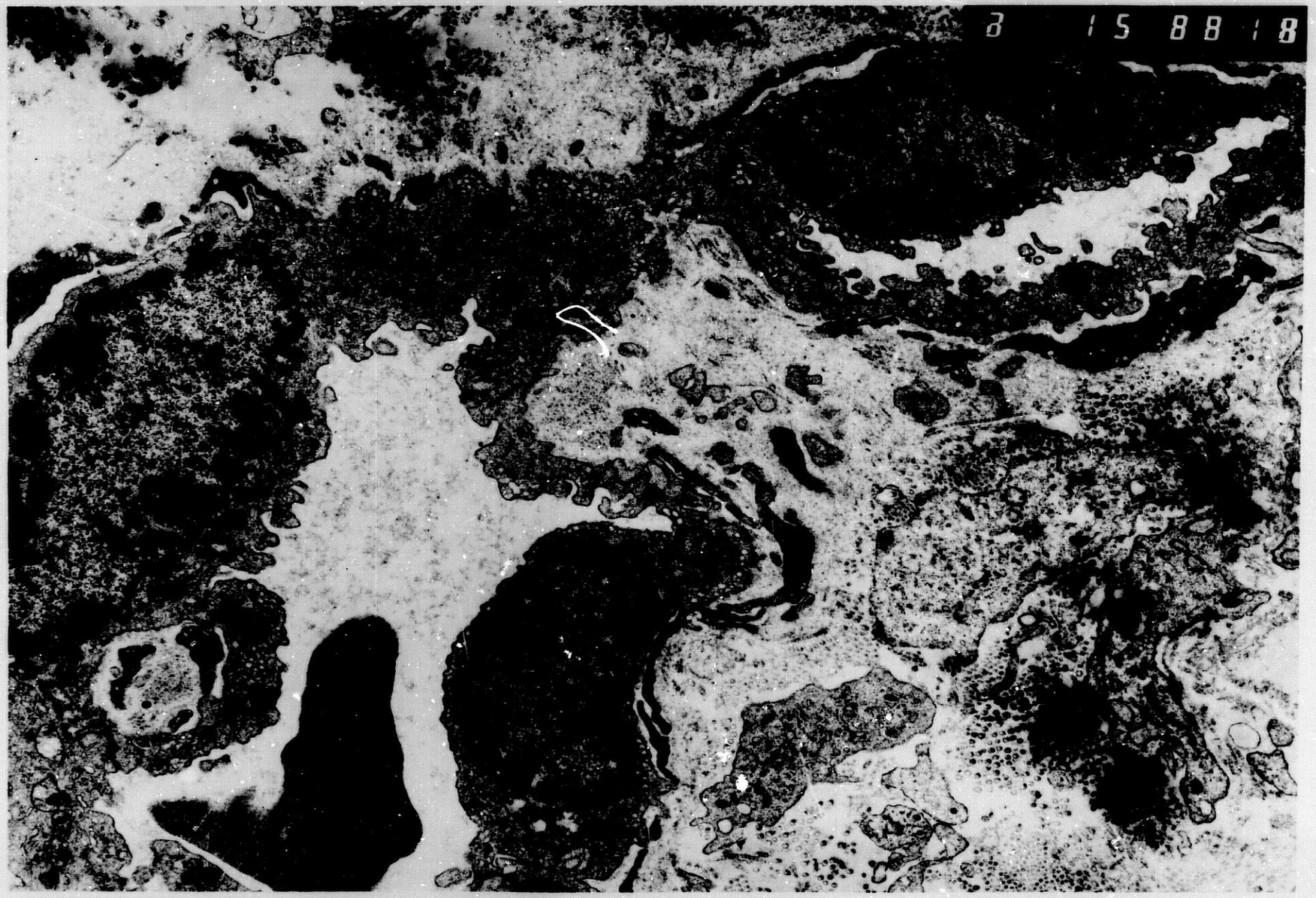
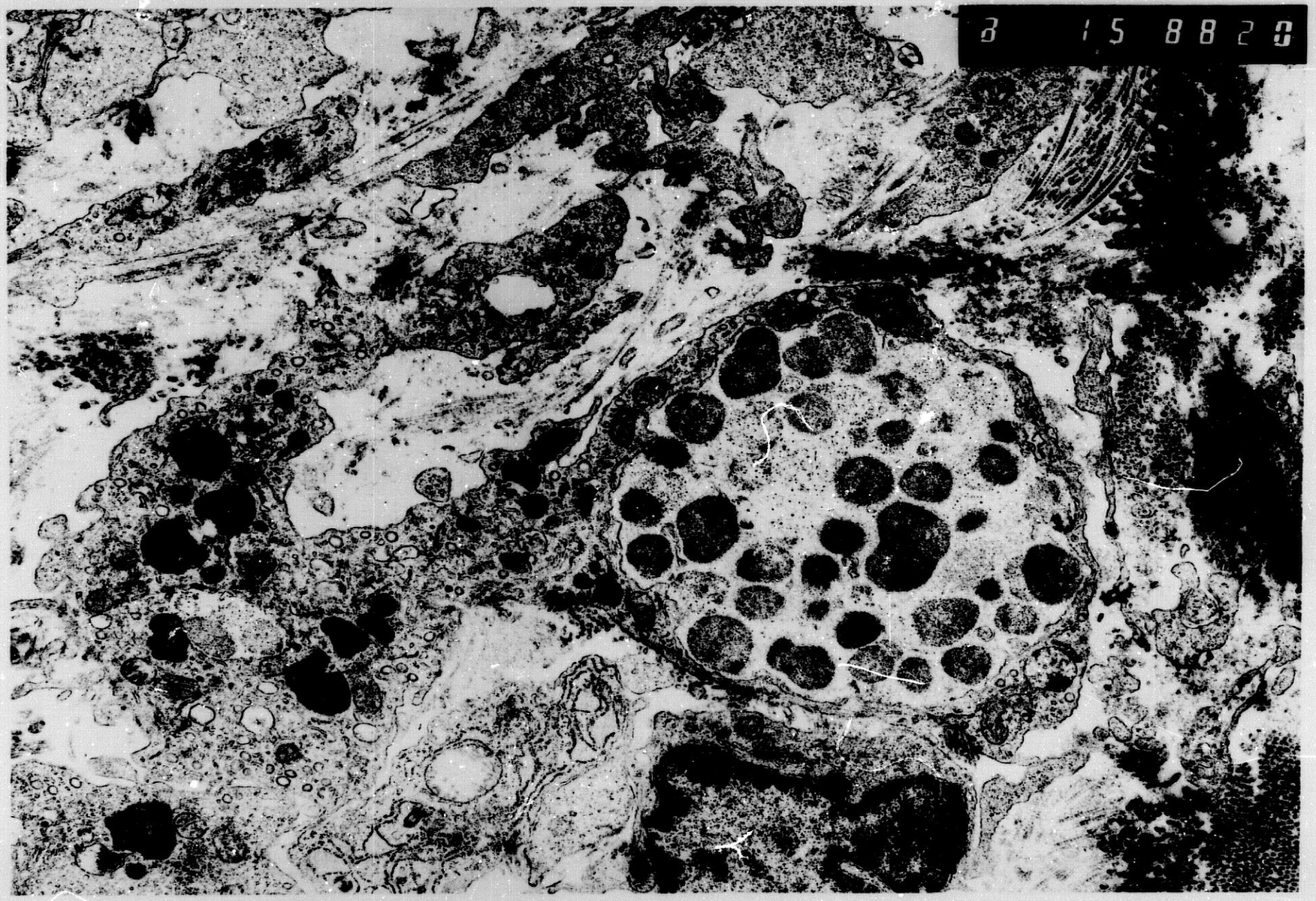

3 15 88 18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3-2-4.- E S T U D I O E S T A D I S T I C O

Para comparar los resultados obtenidos en el grupo control (60 casos) y grupo dextranomero (67 casos) en función de los diferentes valores de la velocidad media/ absoluta de cicatrización (V.M.A.C.) se ha recurrido a / un test de STUDENT cuyo estadístico tiene la expresión:

$$\hat{t} = \frac{|\bar{x}_1 - \bar{x}_2|}{\sqrt{\left[\frac{n_1+n_2}{n_1 \cdot n_2}\right]\left[\frac{a_1+a_2}{n_1+n_2-2}\right]}}$$

Con grado de libertad. G.L.= $n_1\ n_2-2$

n_1= 60

n_2= 67

$\bar{X}_1$= 0,62

$\bar{X}_2$= 1,04

$$a_1 = \sum_i X_i^2 - \frac{\left(\sum_i X_i\right)^2}{n_1} \quad ; \quad a_2 = \sum_j Y_j^2 - \frac{\left(\sum_j Y_j\right)^2}{n_2}$$

$$\hat{t} = \frac{0'62 - 1'04}{\sqrt{\left[\frac{60+67}{60 \cdot 67}\right]\left[\frac{\sum_i X_i^2 - \frac{\left(\sum_i X_i\right)^2}{60} + \sum_j Y_j^2 - \frac{\left(\sum_j Y_j\right)^2}{67}}{60+67-2}\right]}}$$

Siendo: X_i= Valores de V.M.A.C. en grupo control (0,47, 0,36, 0,55, 0,61, 0,87, 0,76, 0,68, 0,40, etc...)

X_j= Valores de V.M.A.C. grupo dextranomero (1,23, 1,02, 0,87, 0,68, 1,53, 1,02, 1,23, etc...)

$$\hat{t} = \frac{0'62 - 1'04}{\sqrt{\left[\frac{60+67}{60\cdot 67}\right]\left[\frac{\sum_i (0'47+0'36+0'55\ldots) - \frac{(\sum_i (0'47\ldots))^2}{60} + \sum_i (1'23\ldots) - \frac{(\sum_i 0'23\ldots)}{67}}{125}\right.}}$$

Se obtiene un valor de $\hat{t}$=14,33

El valor para $t_{125:0,01}$= 2,610

Al ser $\hat{t} > t_{125:0,01}$, se admite la hipótesis alternativa, es decir, los tratamientos son realmente diferentes, y por tanto las diferencias que se observan en los / valores de V.M.A.C. son debidas a la respuesta más adecuada al tratamiento con dextranomero.

Este método ha sido realizado en el Departamento de Documentación Clínica, que dirige la Drª Ocón, por el licenciado en ciencias exactas D. Miguel Prados de Reyes.

3-2-5.- G R A F I C A S

3.2.5.1.- GRUPO CONTROL

SUBGRUPO.- A: RATAS.W. SIN TRATAMIENTO FARMACOLOGICO

Nº Casos	T. Trat.	S.H. cm^2	S_1	V.M.R.C.	V.M.A.C.
1	13	6,15	0	7,69	0,47
2	13	"	0	7,69	0,47
3	13	"	0	7,69	0,47
4	17	"	0	5,88	0,36
5	17	"	0	5,88	0,36
6	17	"	0	5,88	0,36
7	11	"	0	9,09	0,55
8	15	"	0	6,66	0,40
9	15	"	0	6,66	0,40
10	15	"	0	6,66	0,40
11	13	"	0	7,69	0,47
12	17	"	0	5,88	0,36

T.T.....	14,66	9,88	6,14
S	6,15 cm^2	6,15	6,15
V.M.R.C.	6,82	10,14	16,91
V.M.A.C.	0,41	0,62	1.04

SUBGRUPO B.- RATAS.W. TRATADAS CON ETIL-MERCURIO-TIOSALISILATO SODICO

Nº de Casos	T. Trat.	S.H. cm^2	S_1	V.M.R.C.	V.M.A.C.
1	11	6,15		9,09	0,55
2	11	"		9,09	0,55
3	11	"		9,09	0,55
4	11	"		9,09	0,55
5	11	"		9,09	0,55
6	11	"		9,09	0,55
7	13	"		7,69	0,47
8	13	"		7,69	0,47
9	13	"		7,69	0,47
10	10	"		10,00	0,61
11	10	"		10,00	0,61
12	12	"		8,33	0,51

T.T. 11,41
S. 6,15
V.M.R.C. 8,76
V.M.A.C. 0,54

SUBGRUPO C.- RATAS W. TRATADAS CON FIBRINOLISINA DESOXIRRIBONUCLEASA COLISTINA .....

Nº de Casos	T. Trat.	S.H. cm^2	S_1	V.M.R.C.	V.M.A.C.
1	9-2	6,15		14,28	0,87
2	9-2	"		14,28	0,87
3	9-2	"		14,28	0,87
4	9-2	"		14,28	0,87
5	9-2	"		14,28	0,87
6	11-2	"		11,11	0,68
7	11-2	"		11,11	0,68
8	11-2	"		11,11	0,68
9	9-2	"		14,28	0,87
10	9-2	"		14,28	0,87
11	10-2	"		12,50	0,76
12	10-2	"		12,50	0,76

T.T. 8,50
S. 6,15
V.M.R.C. 11,76
V.M.A.C. 0,72

SUBGRUPO D.- RATAS.W. TRATADAS CON FIBRINOLISINA DESOXIRRIBONUCLEASA SULFAMIDOTIAZOL

Nº de Casos	T. Trat.	S.H. cm^2	S_1.	V.M.R.C.	V.M.A.C.
1	9-2	6,15		14,28	0,87
2	9-2	"		14,28	0,87
3	10-2	"		12,50	0,76
4	10-2	"		12,50	0,76
5	9-2	"		14,28	0,87
6	9-2	"		14,28	0,87
7	10-2	"		12,50	0,76
8	10-2	"		12,50	0,76
9	9,2	"		14,28	0,87
10	11-2	"		11,11	0,68
11	9-2	"		14,28	0,87
12	10-2	"		12,50	0,76

T.T. 7,66

S. 6,15

V.M.R.C. 13,05

V.M.A.C. 0,80

SUBGRUPO E - RATAS W. TRATADAS CON ACIDO HIALURONICO

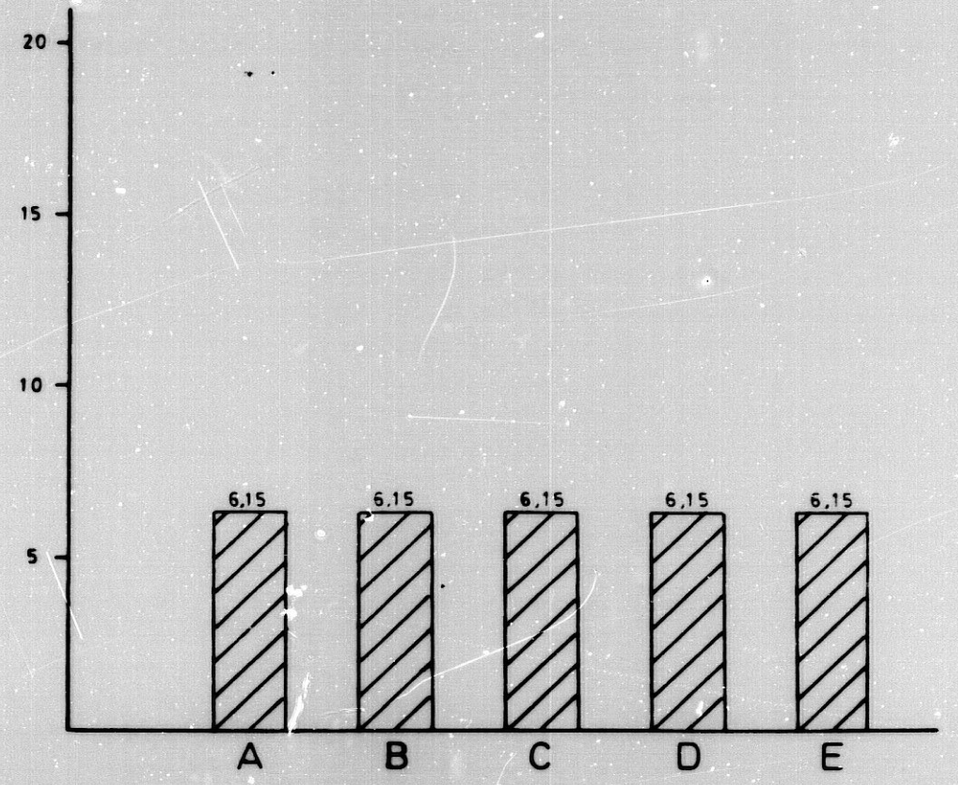
Nº de Casos	T.Trat.	S.H. cm^2	V.M.R.C.	V.M.A.C.
1	13-2	6,15	9,09	0,55
2	13-2	"	9,09	0,55
3	14-2	"	8,33	0,51
4	17-2	"	6,66	0,40
5	17-2	"	6,66	0,40
6	14-2	"	8,33	0,51
7	14-2	"	8,33	0,51
8	13-2	"	9,09	0,55
9	13-2	"	9,09	0,55
10	13-2	"	9,09	0,55
11	13-2	"	9,09	0,55
12	13-2	"	9,09	0,55

T.T. 11,91
S. 6,15
V.M.R.C. 8,39
V.M.A.C. 0,51

FASE EXPERIMENTAL

SUPERFICIES TRATADAS

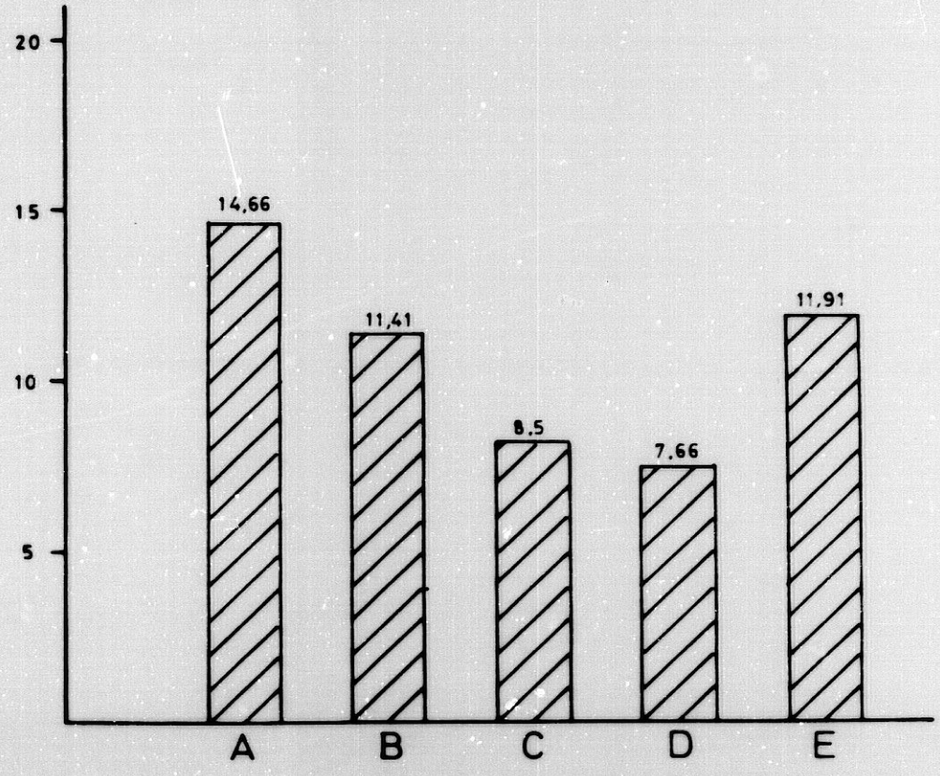
SUBGRUPO	A	6.15 cm^2
"	B	6,15 cm^2
"	C	6,15 cm^2
"	D	6,15 cm^2
"	E	6,15 cm^2



FASE EXPERIMENTAL

TIEMPOS DE TRATAMIENTO STANDAR

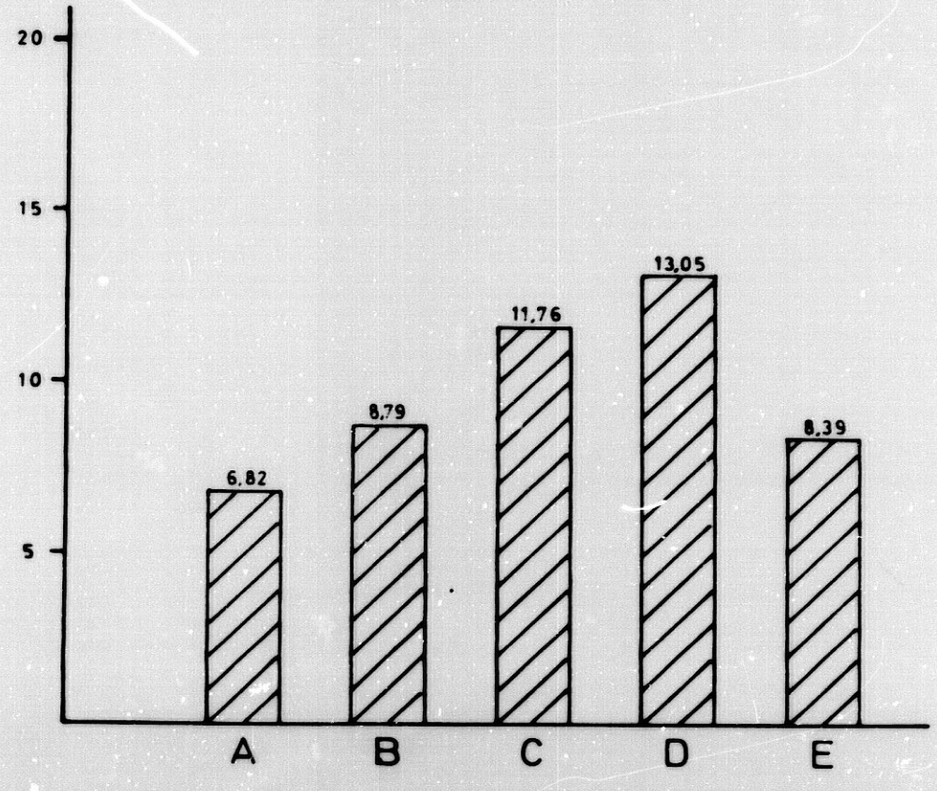
SUBGRUPO	A	14,66 dias
"	B	11,41 dias
"	C	8,5 dias
"	D	7,66 dias
"	E	11,91 dias



FASE EXPERIMENTAL

VMRC

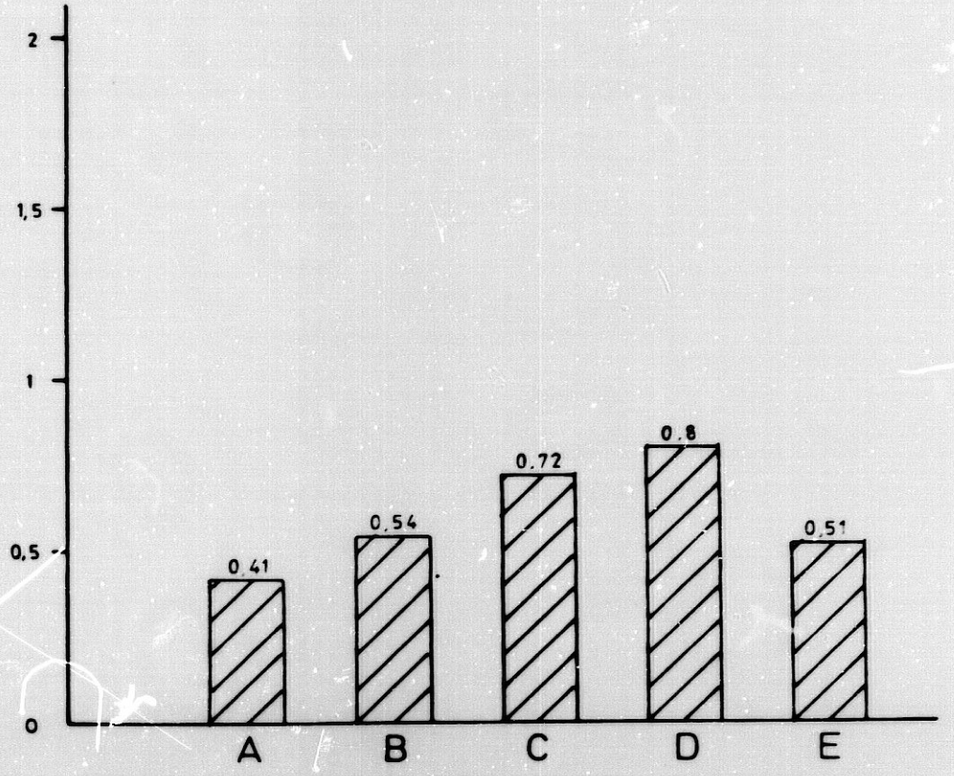
SUBGRUPO	A	6,82
"	B	8,79
"	C	11,76
"	D	13,05
"	E	8,39



FASE EXPERIMENTAL

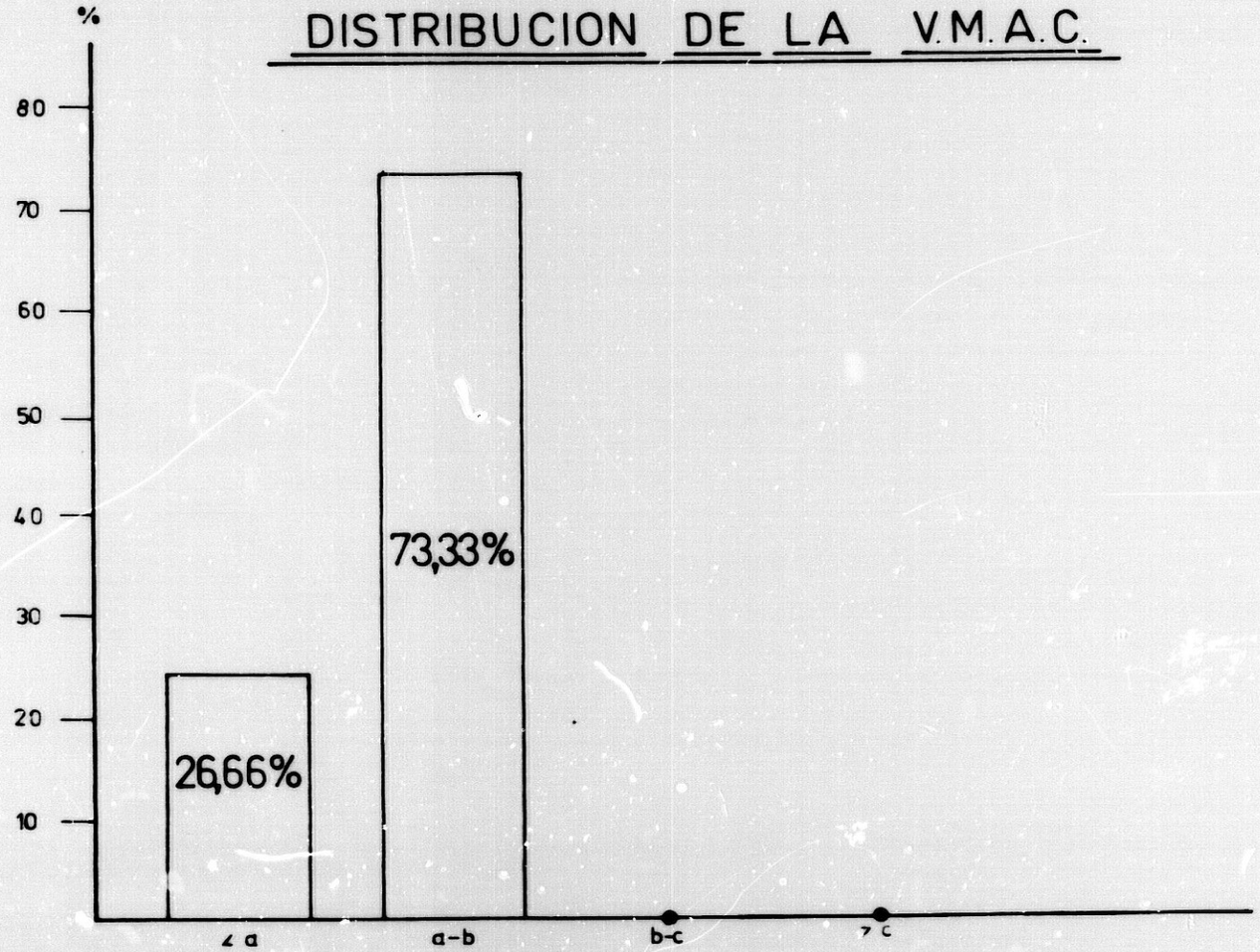
VMAC

SUBGRUPO	A	0.41	cm^2/dia
"	B	0,54	cm^2/dia
"	C	0,72	cm^2/dia
"	D	0,8	cm^2/dia
"	E	0,51	cm^2/dia



Grupo de Control	
a =	0,5 $cm^2/d.$
b =	1 "
c =	1,5 "

∠ a —	26 66 %
a-b —	73 33 "
b-c —	0 "
⊿ c —	0 "



FASE EXPERIMENTAL

RESULTADOS GLOBALES GRUPO 1 TRATAMIENTO STANDAR.

Nº CASOS	60
T. TRAT.	9,86 dias
S.	6,15 cm^2
S_1	0
V.M.R.C.	10,14
V.M.A.C.	0,62 cm^2/dia

GRUPO - 2º .- RATAS W. TRATADAS CON DEXTRANOMERO

Nº de Casos	T.trat.	S.H. cm^2	V.M.R.C.	V.M.A.C.
1	5	6,15	20,00	1,23
2	5	"	20,00	1,23
3	5	"	20,00	1,23
4	6	"	16,66	1,02
5	6	"	16,66	1,02
6	7	"	14,28	0,87
7	7	"	14,28	0,87
8	6	"	16,66	1,02
9	5	"	20,00	1,23
10	6	"	16,66	1,02
11	6	"	16,66	1,02
12	6	"	16,66	1,02
13	6	"	16,66	1,02
14	9	"	11,11	0,68
15	7	"	14,28	0,87
16	5	"	20,00	1,23
17	7	"	14,28	0,87
18	4	"	25,00	1,53
19	9	"	11,11	0,68
20	6	"	16,66	1,02
21	6	"	16,66	1,02
22	7	"	14,28	0,87
23	5	"	20,00	1,23
24	5	"	20,00	1,23
25	6	"	16,66	1,02
26	7	"	14,28	0,87
27	6	"	16,66	1,02
28	6	"	16,66	1,02
29	6	"	16,66	1,02
30	6	"	16,66	1,02
31	4	"	25,00	1,53
32	4	"	25,00	1,53
33	6	"	16,66	1,02
34	7	"	14,28	0,87

Nº de Casos	T. Trat.	S.H. cm^2	V.M.R.C.	V.M.A.C.
35	7	6,15	14,28	0,87
36	7	"	14,28	0,87
37	9	"	11,11	0,68
38	8	"	12,50	0,76
39	8	"	12,50	0,76
40	6	"	16,66	1,02
41	5	"	20,00	1,23
42	7	"	14,28	0,87
43	7	"	14,28	0,87
44	6	"	16,66	1,02
45	5	"	20,00	1,23
46	5	"	20,00	1,23
47	5	"	20,00	1,23
48	5	"	20,00	1,23
49	4	"	25,00	1,53
50	6	"	16,66	1,02
51	6	"	16,66	1,02
52	8	"	12,50	0,76
53	8	"	12,50	0,76
54	10	"	10,00	0,61
55	6	"	16,66	1,02
56	7	"	14,28	0,27
57	5	"	20,00	1,23
58	6	"	16,66	1,02
59	6	"	16,66	1,02
60	5	"	20,00	1,23
61	5	"	20,00	1,23
62	4	"	25,00	1,53
63	4	"	25,00	1,53
64	6	"	16,66	1,02
65	6	"	16,66	1,02
66	6	"	16,66	1,02
67	6	"	16,66	1,02

T.T. 6,14
S. 6,15
V.M.R.C. 16,91
V.M.A.C. 1,04

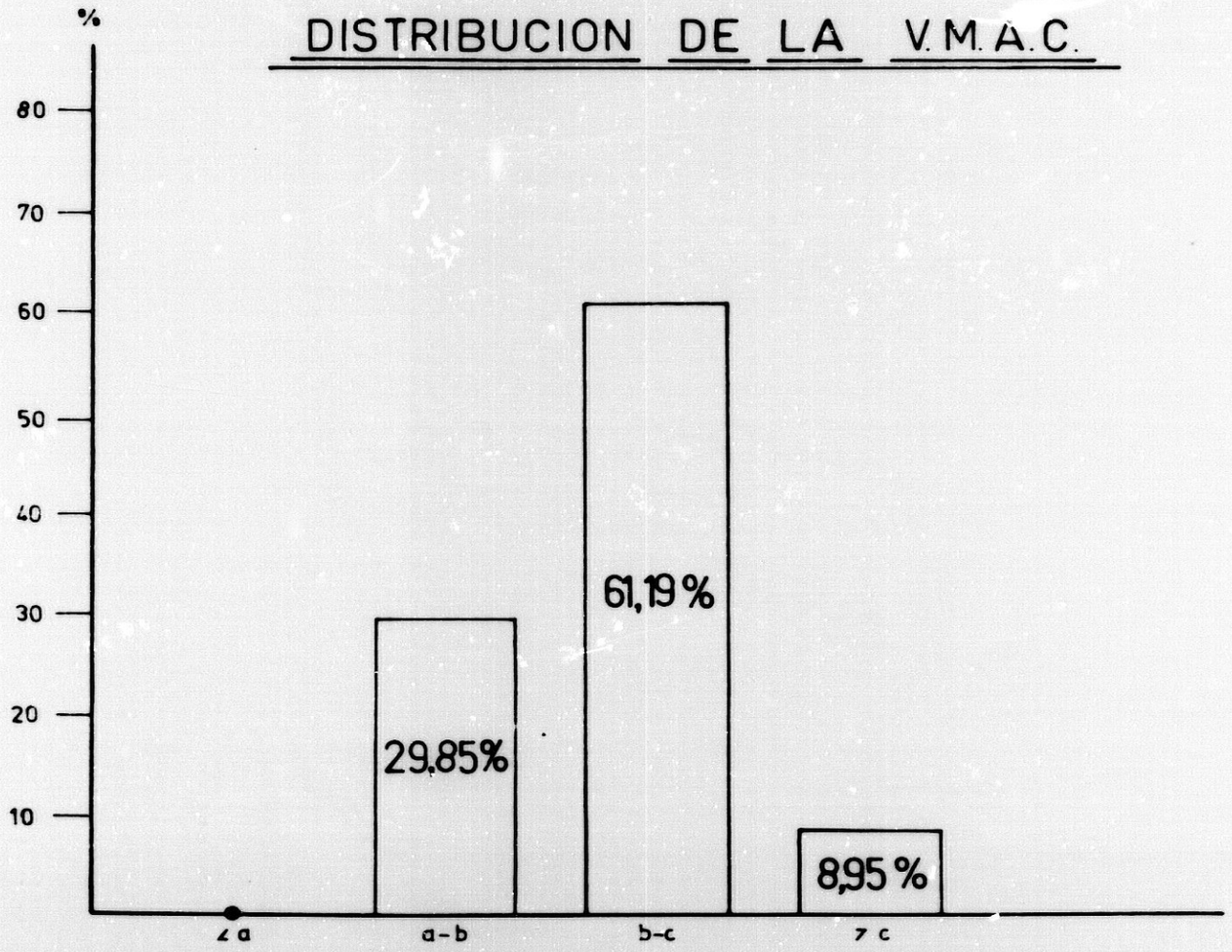
FASE EXPERIMENTAL

RESULTADOS GLOBALES GRUPO 2 TRATADAS CON DEXTRANOMERO.

Nº CASOS	67
T. TRAT.	6,14 dias
S.	6,15 cm^2
S_1	0
V.M.R.C.	16,91
V.M.A.C.	1,04 cm^2/dia

Grupo Dextranomero	
a =	0,5 cm^2/d
b =	1 "
c =	1,5 "

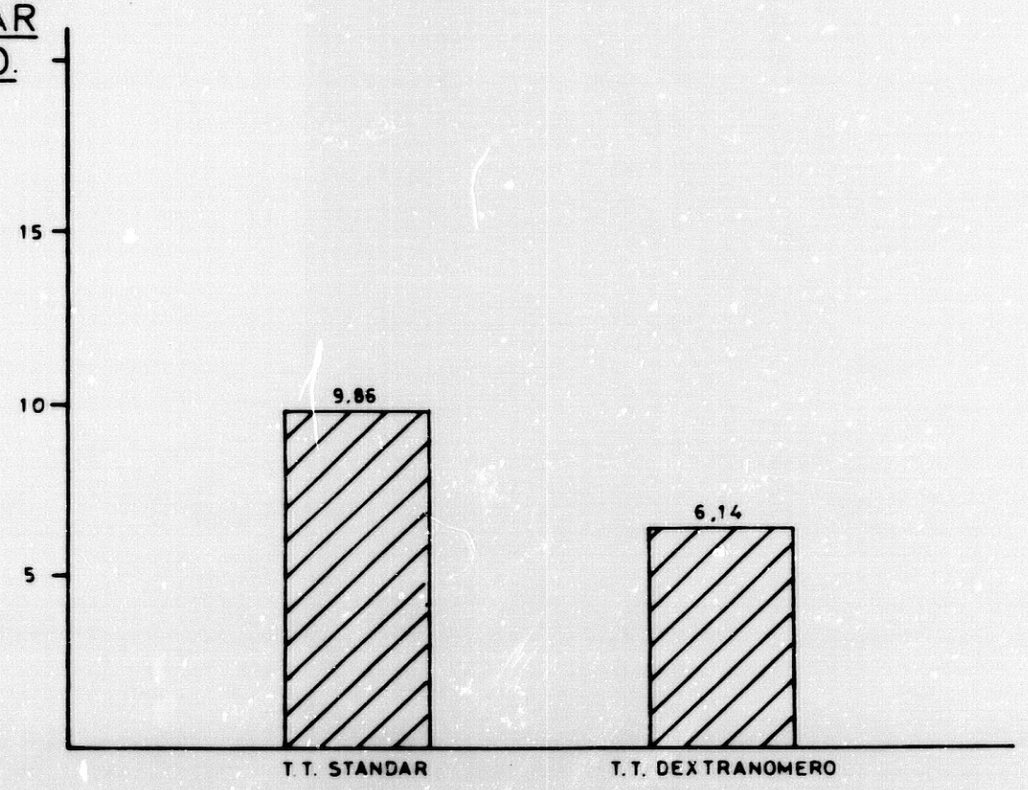
∠ a —	0	%
a-b —	29,85	"
b-c —	61,19	"
⊿-c —	8,95	"



FASE EXPERIMENTAL

TIEMPO TRATAMIENTO COMPARADOS GRUPO STANDAR Y GRUPO DEXTRANOMERO.

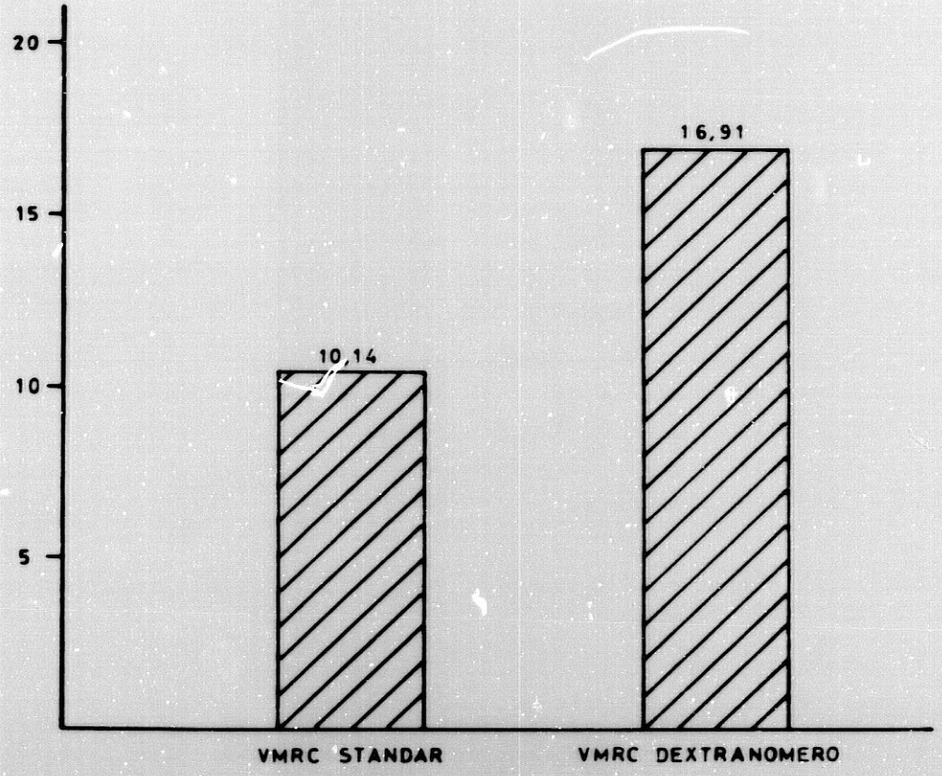
T. T. GRUPO STANDAR	9,86
T. T. GRUPO DEXTRANOMERO	6,14



FASE EXPERIMENTAL

VMRC COMPARADOS GRUPO STANDAR Y GRUPO DEXTRANOMERO.

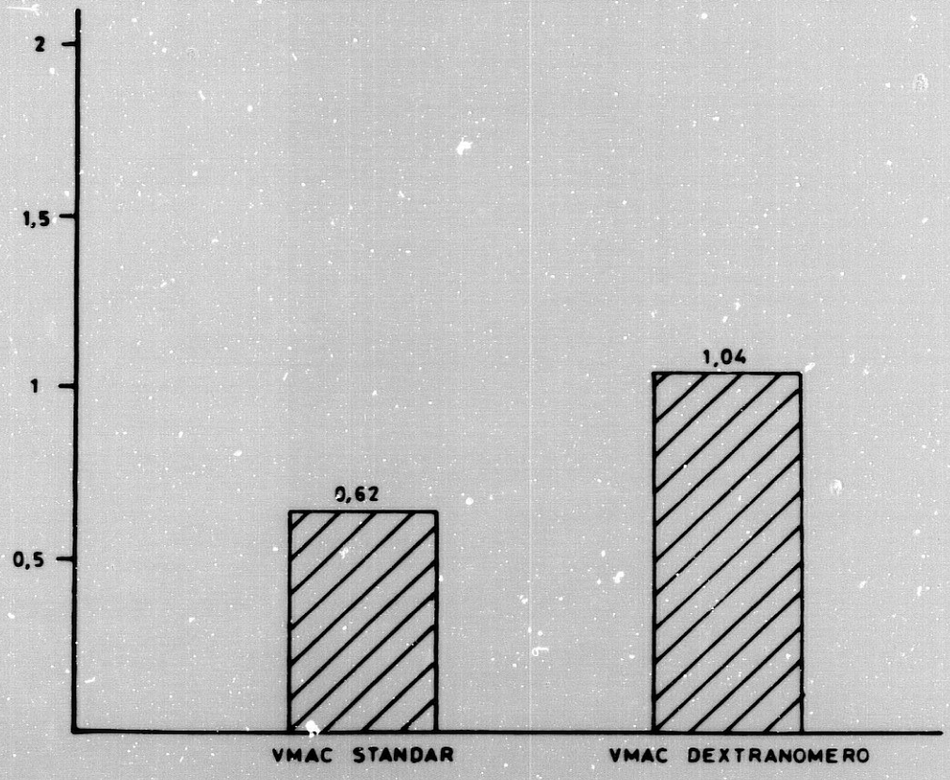
VMRC GRUPO STANDAR	10,14
VMRC GRUPO DEXTRANOMERO	16,91



FASE EXPERIMENTAL

VMAC COMPARADOS GRUPO STANDAR Y GRUPO DEXTRANOMERO.

VMAC GRUPO STANDAR	0,62
VMAC GRUPO DEXTRANOMERO	1,04



VALORES V M A C

INTERVALO	G.C	G.D
∠ a	26.66%	0
a-b	73.33%	29.85%
b-c	0	61.19%
>c	0	8.95%

a = 0.5

b = 1

c = 1.5

G.C Grupo control

G.D Grupo Dextranomero

V M A C

GC	GD	GRU contr.A	Gr. control B	Gr. contro C	Gr. control. D	Gr. contr. E
0.47	1.23	0.47	0.55	0.87	0.87	0.55
0.47	1.23	0.47	0.55	0.87	0.87	0.55
0.47	1.23	0.47	0.55	0.87	0.76	0.51
0.36	1.02	0.36	0.55	0.87	0.76	0.40
0.36	1.02	0.36	0.55	0.87	0.87	0.40
0.36	0.87	0.36	0.55	0.68	0.87	0.51
0.55	0.87	0.55	0.47	0.68	0.76	0.51
0.40	1.02	0.40	0.47	0.68	0.76	0.55
0.40	1.23	0.40	0.47	0.87	0.87	0.55
0.40	1.02	0.40	0.61	0.87	0.68	0.55
0.47	1.02	0.47	0.61	0.76	0.87	0.55
0.36	1.02	0.36	0.51	0.76	0.76	0.55
0.55	1.02					
0.55	0.68					
0.55	0.87					

G.C	G.D
0.55	1.23
0.55	0.87
0.55	1.53
0.47	0.68
0.47	1.02
0.47	1.02
0.61	0.87
0.61	1.23
0.51	1.23
0.87	1.02
0.87	0.87
0.87	1.02
0.87	1.02
0.87	1.02
0.68	1.02
0.68	1.53
0.68	1.53
0.87	1.02
0.87	0.87
0.76	0.87
0.76	0.68
0.87	0.76
0.87	0.76
0.76	1.02
0.76	1.23

G.C	G.D
0,87	0.87
0,87	0,87
0,76	1,02
0.76	1.23
0.87	1.23
0.68	1.23
0.87	1.23
0.76	1.53
0.55	1.02
0.55	1.02
0.51	0.76
0.40	0.76
0.40	0.61
0,51	1.02
0.51	0,87
0.55	1.23
0,55	1.02
0,55	1.02
0.55	1.23
0.55	1.23
	1.53
	1.53
	1.02
	1.02
	1.02
	1.02
	0.87

4.- D I S C U S I O N

La multiple literatura consultada , es el mejor / reflejo de la problemática actual sobre el tratamiento / de las heridas, ante la ineficacia de los muy variados / tratamientos por casi nadie ignorados.

Muchos de los factores estudiados, que se pueden/ englobar en procesos biológicos de la curación de las heridas, y factores ambientales y nutricionales, SHELDON, V. POLLACK (1979); JACOBSSON, ROTHMAN, ARTURSON, GANROT, HAEGER Y JUHLIN (1976); WINTER (1965); WINTER (1972) ; / GRILLO, GROSS (1967); WEISS (1955); VAN WINKLE (1967) ; GABBIANI Y RYAN (1974); KLEVAY, RECK y BARCOME (1979) ; SLATER, MILVAN, JOEB (1971); PROCKOP, y GUZMAN (1977) ; HUNT Y ZEDERFELDT (1969); FERNANDEZ MADRID, PRASAD Y O-/ BERLEAS (1973), etc.

Como quiera que sea en cada herida será necesario realizar un tratamiento local diário, de drenaje y limpieza, más aplicación de un apósito protector adecuado, que permita la protección de la misma, retarde la evaporación y permita una cicatrización rápida en las mejores condiciones posibles. WINTER (1962), WINTER (1972) . Según nuestra experiencia y la literatura consultada, el/ apósito a aplicar sobre la herida debe reunir los siguientes requisitos:

a) Poseer una gran capacidad de absorción contínua. Algunos de los vendajes convencionales de gasas, absor-/ ven gran cantidad de exudado pero no lo suficiente, el/ producto que nosotros hemos utilizado, dextranomero, debido al gran poder hidrófilo de las microesferas, tiene/ una gran capacidad de absorción contínua de los exudados y detritus de la herida. JACOBSSON, ROTHMAN, ARTURSON, / (1976).

b) Facilitar la epitelización impidiendo o limitando la evaporación, de tal manera que se evite la desecación de la superficie de la herida. Las heridas cubier - tas epitelizan mucho más rapidamente que aquellas que se dejan sin cubrir, y expuestas a la desecación, general - mente, cuando las heridas son dejadas sin cubrir, las células epidermicas tienen que emigrar bajo costras secas ó escaras, y sobre el tejido fibroso subyacente. HINMAN, y MAIBACH (1963).

c) No adherirse a la superficie de la herida para/ no causar un nuevo daño al ser eliminada. La gasa seca e incluso el tul graso, tiene el inconveniente de que se / adhiere al epitelio en proceso de regeneración, y al quitarlo se produce un nuevo daño a la herida. SCALES (1961) WINTER (1972). Nosotros hemos comprobado como al aplicar

el dextranomero debido al gel que se forma, se mantiene húmeda la superficie de la herida y se evita las adherencias de las gasas a la misma.

d) Inhibir el crecimiento bacteriano. Los apósitos convencionales con pocas propiedades absorventes, permiten el acumulo de exudado sobre la superficie de la herida, creando un excelente medio de cultivo para la proliferación de bacterias y hongos, GENS (1974).

Estúdios terapeuticos in vivo, demuestran que el/ dextranomero dada su capacidad absorvente, reduce la cantidad de bacterias de la superficie de la herida , y elimina el exudado impidiendo su proliferación, DAGHER, ALONGI y SMITH (1978); LOCHBUHLER , KAUFMANN Y STORZ / (1978); ROMASZ, BARNHART Y SCHNAGL (1978), nuestros estúdios en hombres y ratas wistar lo confirman.

e) Evitar la formación de costra. Cuando la super-/ ficie de la herida permanece húmeda, las células epidermicas son capaces de emigrar más facilmente, con lo que la epitelización es más rápida, WINTER (1972), FISHER y MAIBACH (1972). Muchos cirujanos no consideran importante el apósito para las heridas suturadas, y algunos prefieren dejar tales heridas suturadas abiertas al aire /

postoperatoriamente. No obstante cuando las heridas suturadas son dejadas a la deshidratación, la formación de / costra fuerza la emigración profunda de las células epiteliales, pudiendo dar como resultado. un surco longitudinal formado a lo largo de la línea de sutura. Tal efecto puede persistir durante varios meses, antes que la reconstrucción uniforme de la capa epidermica ocurra, SHELDON, POLLACK (1979). Coincidimos con ABERG, HEDNER (1976) Al aplicar dextranomero, nunca se forman costras en la/ superficie de la herida, por las circunstancias que en/ su momento discutiremos.

f) Mantener la herida suave y flexible para permi-/ tir el movimiento de las articulaciones. Con los venda-/ jes convencionales el exudado se acumula debajo del mismo, irritando la piel circundante sin lograrse la reducción del edema, REID (1974). Al utilizar dextranomero la flexibilidad y kinemática articular, está asegurada como lo revelan nuestros resultados obtenidos en nuestros enfermos tratados con heridas en regiones periarticulares, JONSSON (1975), asegura que de sus 27 enfermos tratados/ con quemaduras de 2º y 3º grado, todos presentan el área tratada suave y flexible, consiguiendo una excelente recuperación funcional, similares resultados obtienen PAAVOLAINEN Y SUNDELL (1976).

g) No causar sensibilización. Muchos de los agentes quimioterápicos complementarios de los tratamientos convencionales e incluso los mismos apósitos adhesivos, pueden dar lugar a problemas de toxicidad, sensibilización, desarrollo de resistencias e irritación del tejido sano circundante... En ninguno de nuestros enfermos, ni animales de experimentación tratados con dextranomero se han/ presentado reacciones alérgicas , ni manifestaciones de toxicidad.

En todos nuestros enfermos, a las 24-48 horas de/ aplicado el dextranomero, hay una disminución importante del edema, presentando la zona cruenta una flexibilidad, humedad y elasticidad manifiestas, que permiten una inmejorable recuperación funcional de las articulaciones circundantes a la herida. Similares resultados refieren JACOBSSON, JONSSON, RANK y ROTHMAN (1976). Esta disminución -- del edema la relacionan ARTURSON, HAMBERG y JONSSON , (1973) con la absorción por las microesferas de dextranomero de las prostaglandinas, principalmente la PGE_2 , / detritus y sustancias vasoactivas del fondo de la herida a la superficie del gel, según las determinaciones bio-/ químicas por ellos realizadas.

Nosotros damos aún más valor, a esta disminución/

del edema, por la absorción contínua de prostaglandinas/ y sustancias vasoactívas, al considerar que, según DIAZ-FLORES (1979), las prostaglandinas producen dilatación / de las arteriolas (MESSINA, E.J.; WEINER, R.K. y KALEY , G.-1974-), aumento de la permeabilidad sobre todo por la PGE_1 y PGE_2, por acción directa sobre los vasos ó a través de la liberación de histamina por las células cebadas (CRUNKHORN, P., WILLIS, A.L.-1971-; KALEY, G. WEINER R.-1971-), discreto poder quimiotáctico sobre los neutrófilos (KALEY, G. WEINER, R. -1971-), elevación de la temperatura (FELDBERG, W.,y GUPTA , K. P.-1973-), y sensibilización a las acciones de la histamina y la bradiquinina para producir edema (MONCADA, S., FERREIRA, S.H. y / VANE, J.R. -1973-; WILLIAMS, P.J.y MORLEY , J.-1973-) y dolor (FERREIRA, S.H. -1972-).

Sin embargo este mecanismo antiinflamatorio del / dextranomero al absorver las prostaglandínas de la superficie de la herida, no lo tienen muy claro HEEL, R.C. MORTON, P. BROGDEN, R.N., SPEIGHT, T.M. y AVERY, G.S. / (1979), quizá por no conocer el efecto que tienen las -/ prostaglandínas (PGE_1 PGE_2) en el proceso inflamatorio. Por el mismo mecanismo patogénico, justificamos la disminución del dolor local, referido por nuestros enfermos / tratados con dextranomero. Similares experiencias tienen

la herida ha quedado totalmente limpia, y no se aislan gérmenes en el cultivo.

7º.- En una herida tratada con dextranomero, no/ se produce infección, ni reinfecciones, siempre que la terapia sea continua y la técnica adecuada.

8º.- El porcentaje de bacterias absorvidas por el gel de dextranomero, aumenta a medida que nos alejamos de la superficie de la herida.

9º.- La ausencia de costra en la superficie de la herida tratada con dextranomero, se debe a la alta actividad fibrinolitica del exudado en el gel de dextranomero.

10º.- La separación molecular en el gel, hace que el fibrinógeno, plasminógeno y alfa--dos-macroglobulina se pongan en contacto, en los interespacios de las microesferas, favoreciendo la actividad fibrinolítica.

11º.- Las heridas cubiertas con dextranomero, epitelizan mucho más rápidamente que si se dejan sin cubrir y expuestas a la desecación.

12º.- En la cicatrización subcostrácea, las células epidérmicas tienen que emigrar y moverse más profundamente en la dermis, para obtener un medio más favorable, todo ello resulta, en una más lenta curación/ de la herida.

13º.- La costra proteje a la herida de la infección, pero ante una herida infectada, la escara impide el drenaje y por consiguiente favorece el crecimiento/ bacteriano.

14º.- No consideramos necesario, el andamiaje de/ hilos de fibrina para la migración de las células epidérmicas, en el proceso de epitelización.

15º.- En la terapeútica con dextranomero, la cicatrización tiene lugar por un rápido crecimiento del tejido de granulación, desde el fondo hacia la superficie, y una epitelización superficial, deslizandose las células epidérmicas sobre el tejido de granulación sano.

16º.- En la terapia con dextranomero se obtiene - una V.M.A.C. muy superior a la obtenida con tratamiento estandar.

17º.- Con el tratamiento estandar no se consigue una limpieza exhaustiva de la herida, por lo que en - algunos casos tras la epitelización superficial se -- reactiva el proceso purulento, apareciendo un abceso/ bajo la cicatriz, o bien se forma un granuloma de --- cuerpo extraño ante la persistencia de restos de tejidos necróticos.

18º.- Heridas rebeldes al tratamiento estandar,- se curan con dextranomero.

19º.- En los enfermos tratados con dextranomero, que previamente se habian mostrado rebeldes al tratamiento estandar, se obtiene un V.M.A.C. inferior al - obtenido en enfermos tratados desde un principio con/ dextranomero.

20º.- El dextranomero está indicado en las h. -- traumáticas, h. quirúrgicas, ulcera vascular, obte--- niéndose mejores resultados que con tratamiento estandar.

21º.- Según otros autores, su indicación es preferente a cualquier otro método terapeútico, en quemaduras, ulceras por presión y ulceras genitales.

22º.- El dextranomero no solo es útil en heridas exudativas y superficiales, sino que también tiene -- sus aplicaciones en heridas profundas y secas no exudativas-.

23º.- De no disponer de dextranomero, aconseja-- mos el empleo de fibrinolíticos y encimas líticos.

24º.- La cicatriz que aparece tras la aplicación de dextranomero, es fina, suave y no retractil, nunca aparecen queloides.

6.- MATERIAL ICONOGRAFICO

6-1.- F A S E H U M A N A

COMENTARIO .-

FOTO Nº 1 .- Es una herida en donde se aprecian coágulos detritus.

FOTO Nº 2,3 .- En ella se ha colocado un plastico / y con un rotulador se ha dibujado el contorno de la misma.

FOTO Nº 4 .- Se aprecia un plastico en el contorno/ de una herida y sobre ella la lente del planímetro polar.

FOTO Nº 5 .- En ella se aprecia la caja del planímetro con: el cuadrante, tornillo de ajuste cero, disco -/ graduado, vernier.

FOTO Nº 6 .- Es una herida con los polvos de dextranomero recien hechados.

FOTO Nº 7 .- Es la misma herida después de 24 horas en ella se aprecia como las microesferas se han convertido en un gel.

FOTO Nº 8,9 .- Es la misma herida, en ella se está/ lavando el gel, se puede apreciar la torunda y la sonda/ de aspiración.

FOTO Nº 10 .- En ella podemos apreciar una centrífuga y un tubo de ensayo, en su interior hay dextranomero/ gelificado.

FOTO Nº 11 .- Ya se ha centrifugado el tubo de ensayo con su contenido y podemos apreciar como en la parte/

superior del tubo hay un líquido seroso que es el que nosotros mandamos para determinar: proteína, fibrinógeno , alfa$_2$-macroglobulinas,etc.

FOTO Nº 12 .- Ya se ha sacado el sobrenadante.

FOTO Nº 13,14 .- Se puede apreciar una gran herida/ traumática en pierna y pié derecho.

FOTO Nº 15,16 .- Se puede apreciar el gel y el abundante tejido de granulación.

FOTO Nº 17,18 .- Se puede apreciar como queda la herida después de ser lavada con suero.

FOTO Nº 19,20 .- La pierna en un estadio muy avanzado de curación.

FOTO Nº 21 .- Se puede apreciar como el tejido de / granulación va abriendo el hueso.

FOTO Nº 22 .- Herida contusa que produce sección de la arteria y vena tibial.

FOTO Nº 23 .- Es el mismo pié una semana después, / cuando se empieza a utilizar dextranomero, aquí podemos/ observar que tiene unos cortes longitudinales que se le/ hicieron para evitar que el edema produjera un mayor compromiso vascular, se pueden observar zonas de necrosis.

FOTO Nº 24 .- Igual que la anterior.

FOTO Nº 25 .- Ya está curado.

FOTO Nº 26 .- Es el pié de una señora que tiene necrosado el talón.

FOTO Nº 27 .- Después de un tiempo de tratamiento.

FOTO Nº 28,29 .- Igual que la anterior.

FOTO Nº 30,31 .- Podemos apreciar un buen tejido de granulación, limpio, sin esfacelos ni detritus.

FOTO Nº 32 .- Herida en la pared abdominal.

FOTO Nº 33 .- Algún tiempo después, no hay costra,/ ni pus, ni detritus celulares, sólo se aprecia un tejido de granulación bueno.

FOTO Nº 34,35 .- Igual que la anterior, en una fase más avanzada.

FOTO Nº 36 .- Igual que la 35, en una fase más avanzada.

FOTO Nº 37 .- Se le ha hecho la sutura secundaria.

FOTO Nº 38 .- Herida varicosa cuando se empieza a tratar con dextranomero.

FOTO Nº 39 .- Algunos días después.

FOTO Nº 40 .- Curada.

FOTO Nº 41 .- Dehiscencia de sutura por infección / cuando se empieza a curar.

FOTO Nº 42 .- Algunos días después.

FOTO Nº 43,44 .- Se le ha hecho la sutura secundaria

FOTO Nº 45 .- Herida traumática en cara posterior / de la pierna, tercio medio.

FOTO Nº 46 .- Después de algunos días de tratamiento.

FOTO Nº 47,48 .- Practicamente curada.

FOTO Nº 49 .- Herida en muslo.

FOTO Nº 50 .- Ya curada.

FOTO Nº 51 .- Gran herida 1/3 inferior del muslo derecho.

FOTO Nº 52 .- Algún tiempo después del tratamiento.

FOTO Nº 53,54 .- Es la herida de la foto 51, ya curada.

FOTO Nº 55 .- Heridas traumáticas en ambos miembros inferiores.

FOTO Nº 56,57 .- Es el muñón de la foto 55, se ha / hecho la foto más proxima, aquí se puede ver costra y fibrina, es cuando se empieza el tratamiento.

FOTO Nº 58,59 .- Es el pié de la foto 55, más pro-/ximo, se ve la cantidad de costra y fibrina.

FOTO Nº 60 .- Curado.

FOTO Nº 61 .- Herida torpida que llevaba más de tres años.

FOTO Nº 62 .- Quince días después del tratamiento.

FASE EXPERIMENTAL .-

FOTO Nº 1 .- Es una rata antes de la anestesia.

FOTO Nº 2 .- Se va a introducir en el recipiente -

con éter.

FOTO Nº 3 .- Se ha empezado a quitarle los pelos.

FOTO Nº 4 .- Se le ha hecho la herida.

FOTO Nº 5 .- Tubo de ensayo con cultivo de gérmenes .

FOTO Nº 6 .- Se procede a inocular gérmenes más polvo de talco.

FOTO Nº 7 .- Elementos de que consta el apósito.

FOTO Nº 8 .- Se ha colocado la gasa debajo de la malla metálica.

FOTO Nº 9,10 .- Se procede a hechar las microesferas de dextranomero.

FOTO Nº 11 .- Se ha colocado el apósito.

FOTO Nº 12,13 .- Herida tratada con dextranomero, / puede apreciarse que no existe costra, ni detritus, ni / pus.

FOTO Nº 14,15 .- Herida tratada con medicación standar, se puede apreciar la costra cubriendo la herida.

FOTO Nº 16 .- Herida tratada con dextranomero, se / aprecia un gran tejido de granulación.

FOTO Nº 17 .- Herida ya curada y cicatrizada.

FOTO Nº 18 .- En las curadas con el tratamiento standar, a los 20 días en un gran porcentaje aparece un granuloma como se puede apreciar en la fotografía.

FOTO Nº 19,20 .- Se procede a evacuar el granuloma.

FOTO Nº 21 .- Ya está evacuado, tiene una consistencia blanda.

VALORACION VELOCIDAD CICATRIZACION

Ley de Leconte du Nouy. modificada por Bellini (1964)

$$VMRC = \frac{S - S^1}{S \times T} \times 100$$

VMRC = Velocidad media relativa de cicatrizacion.

S = Superficie Inicial en cm^2

S^1 = Superficie de la Ulcera despues del tiempo de tratamiento

T = Tiempo expresado en dias

VALORACION VELOCIDAD CICATRIZACION

Ley de Leconte-Bellini. modificada por nosotros (1980)

$$VMAC = \frac{VMRC \times S}{100}$$

VMAC = Velocidad media absoluta de cicatrizacion.

VMRA = Velocidad media relativa

S = Superficie m^2

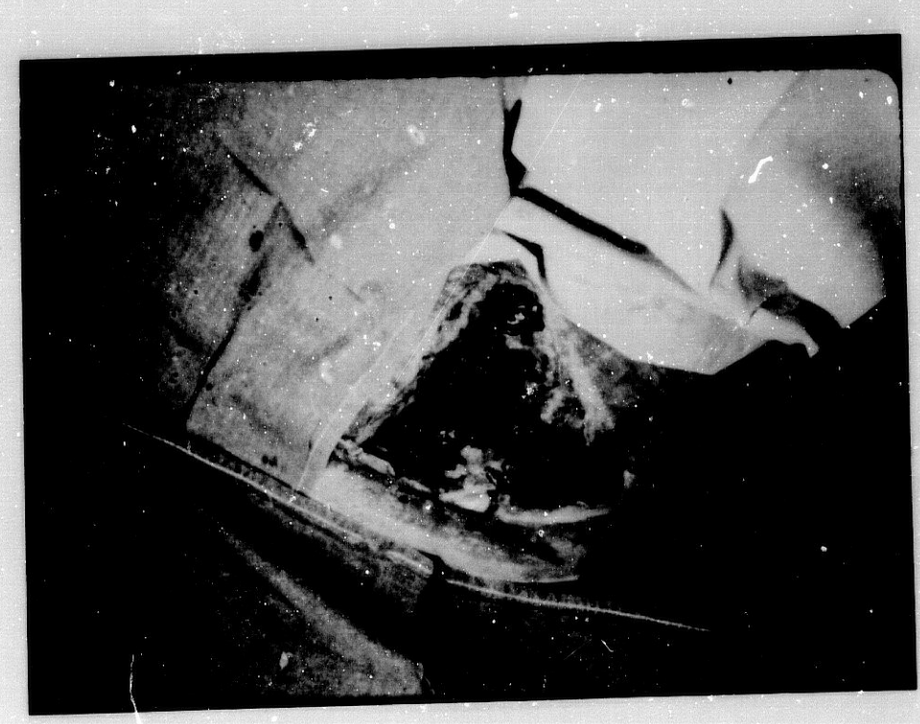


FOTO 1

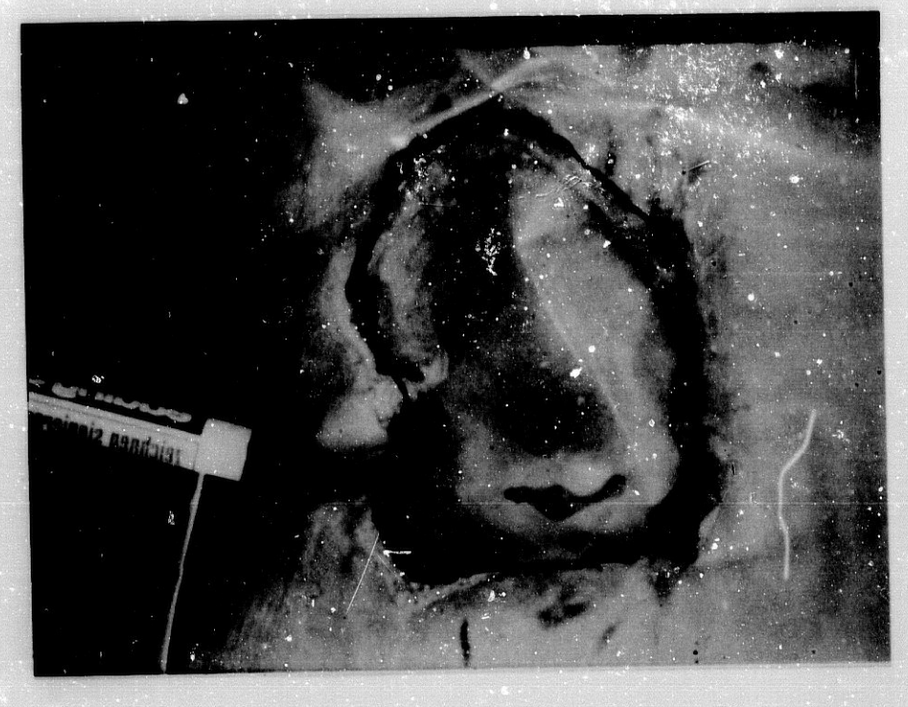


FOTO 2

FOTO 3

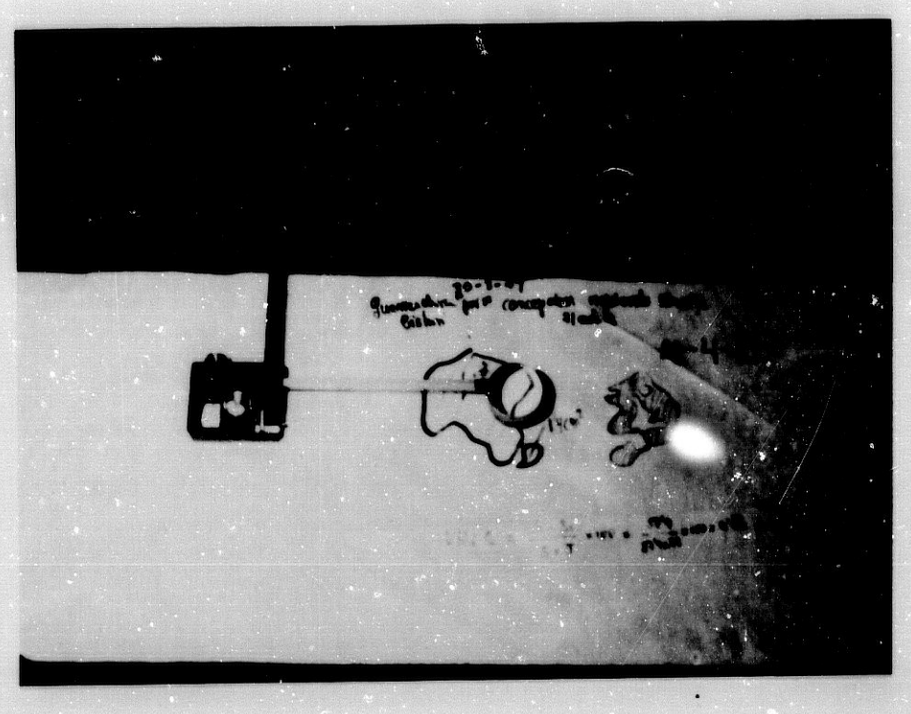


FOTO 4

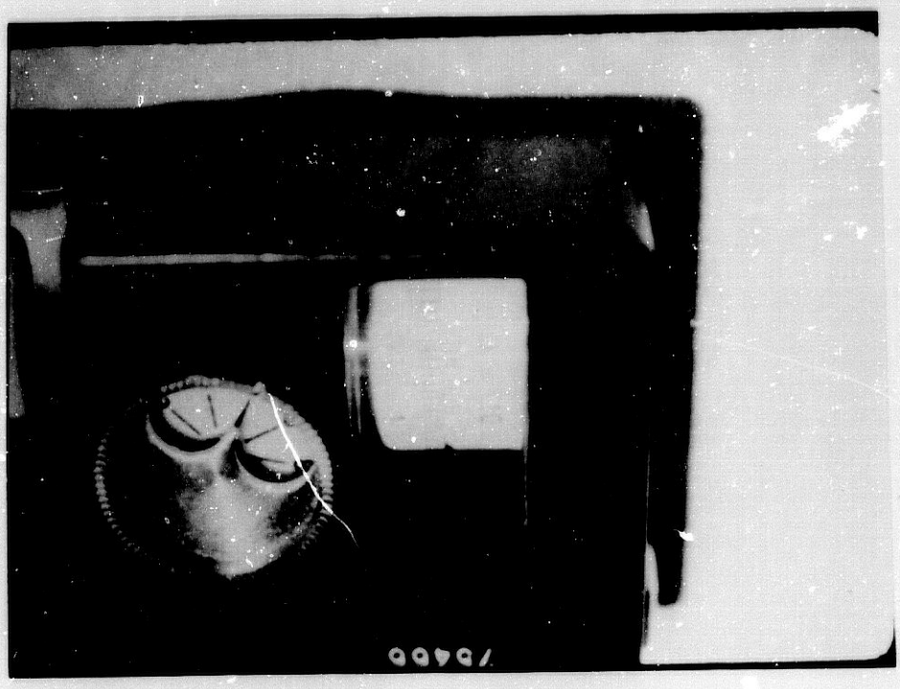


FOTO 5

FOTO 6

FOTO 7

FOTO 8

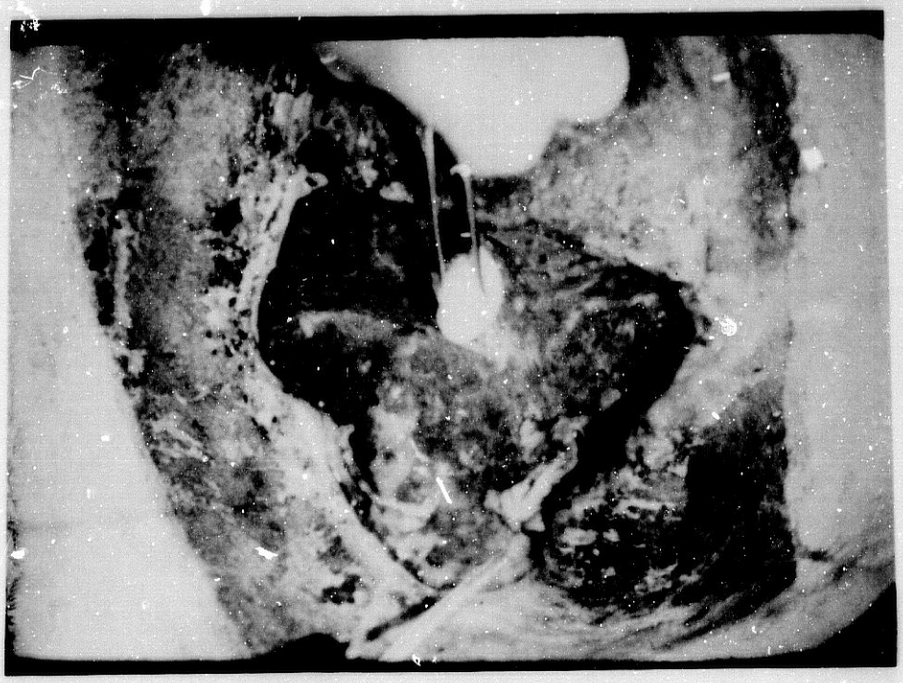


FOTO 9

FOTO 10

FOTO 11

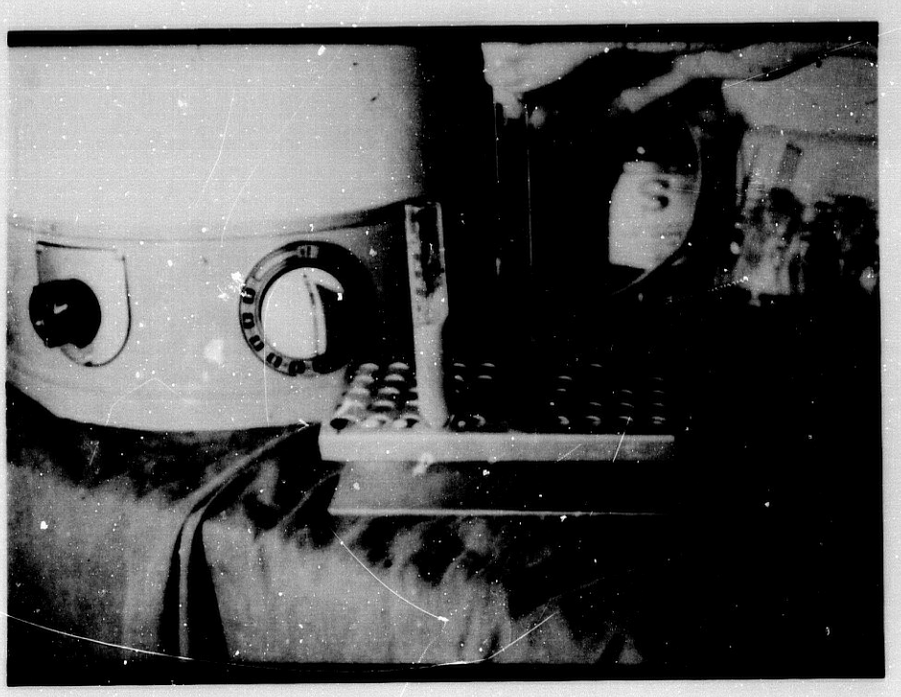
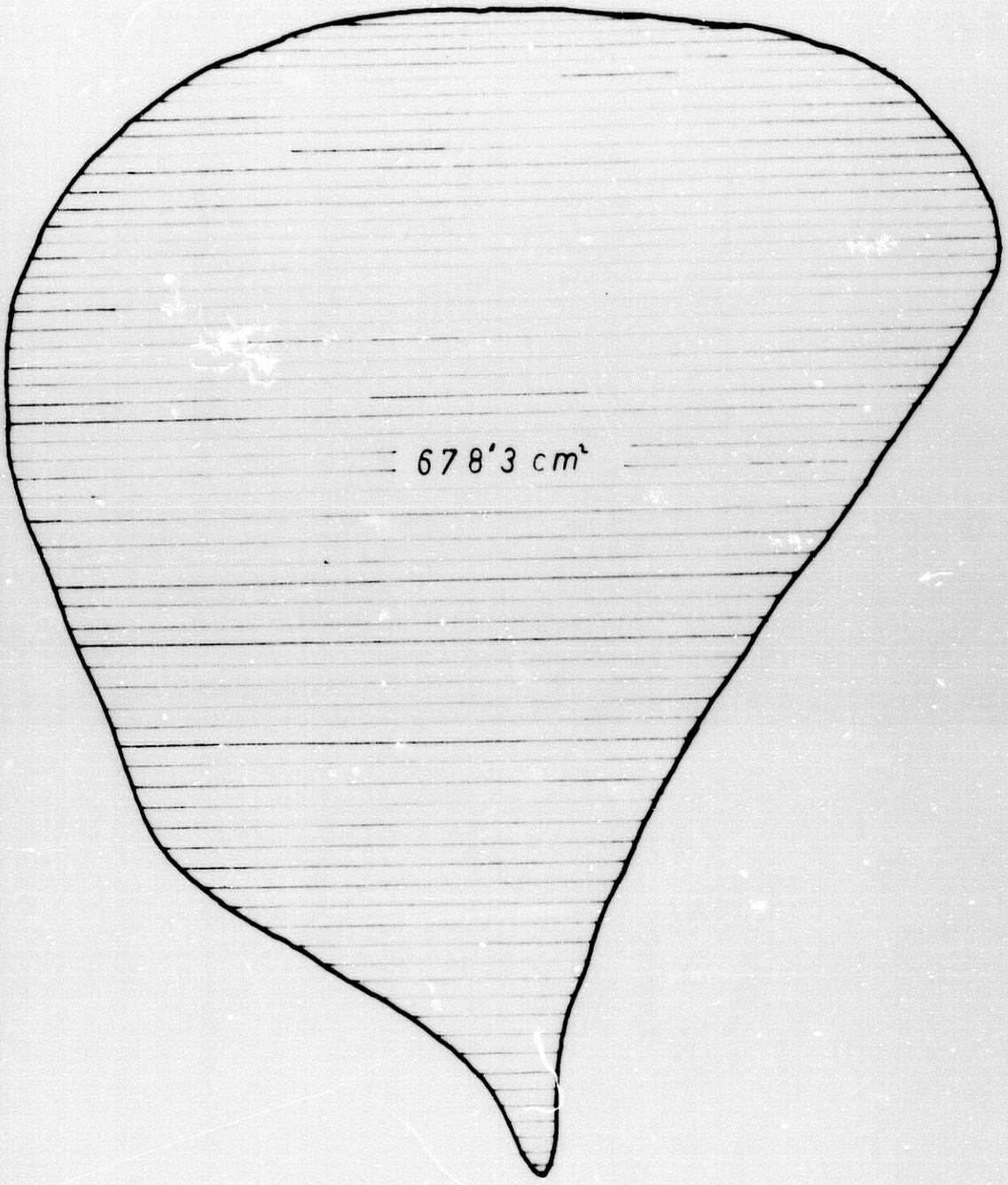
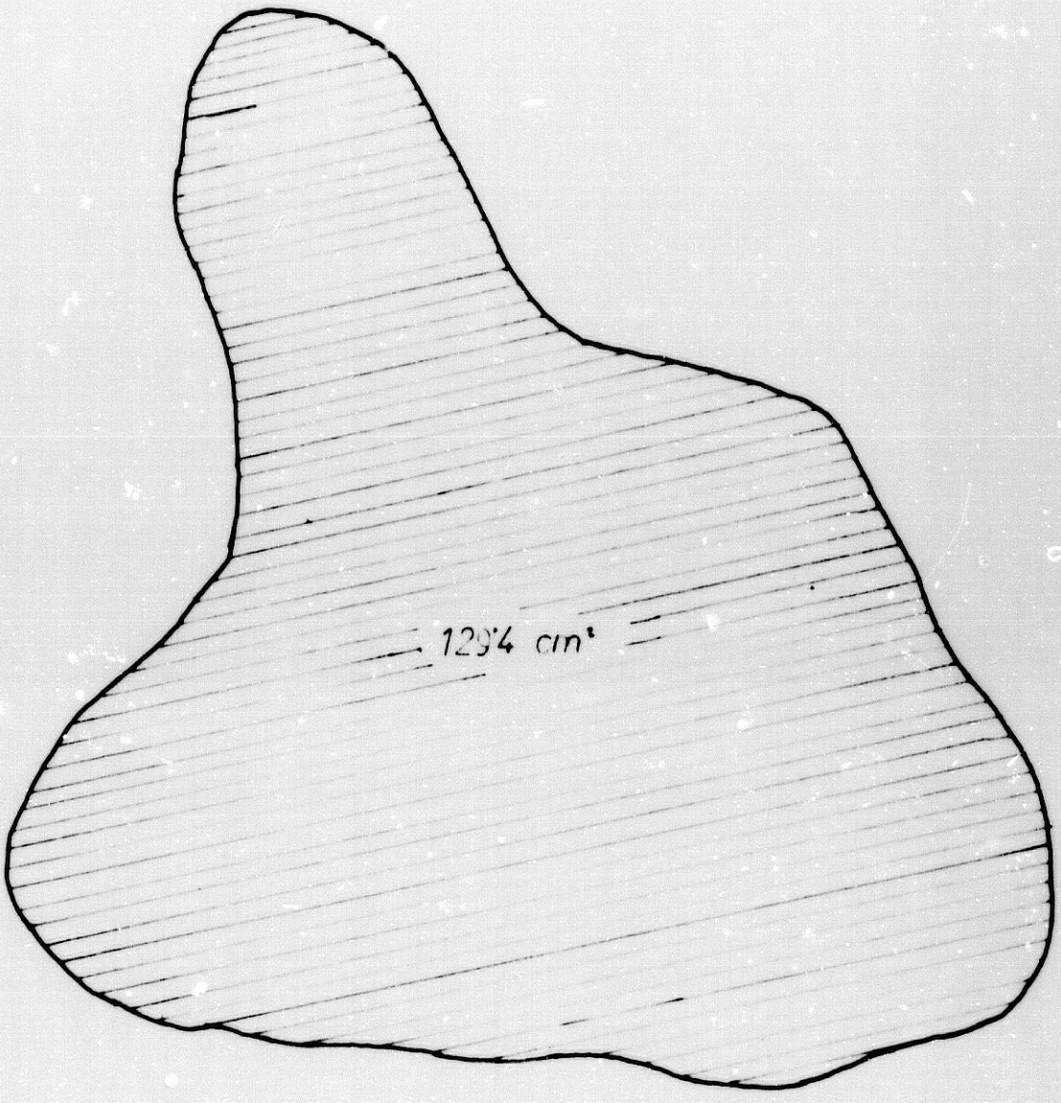


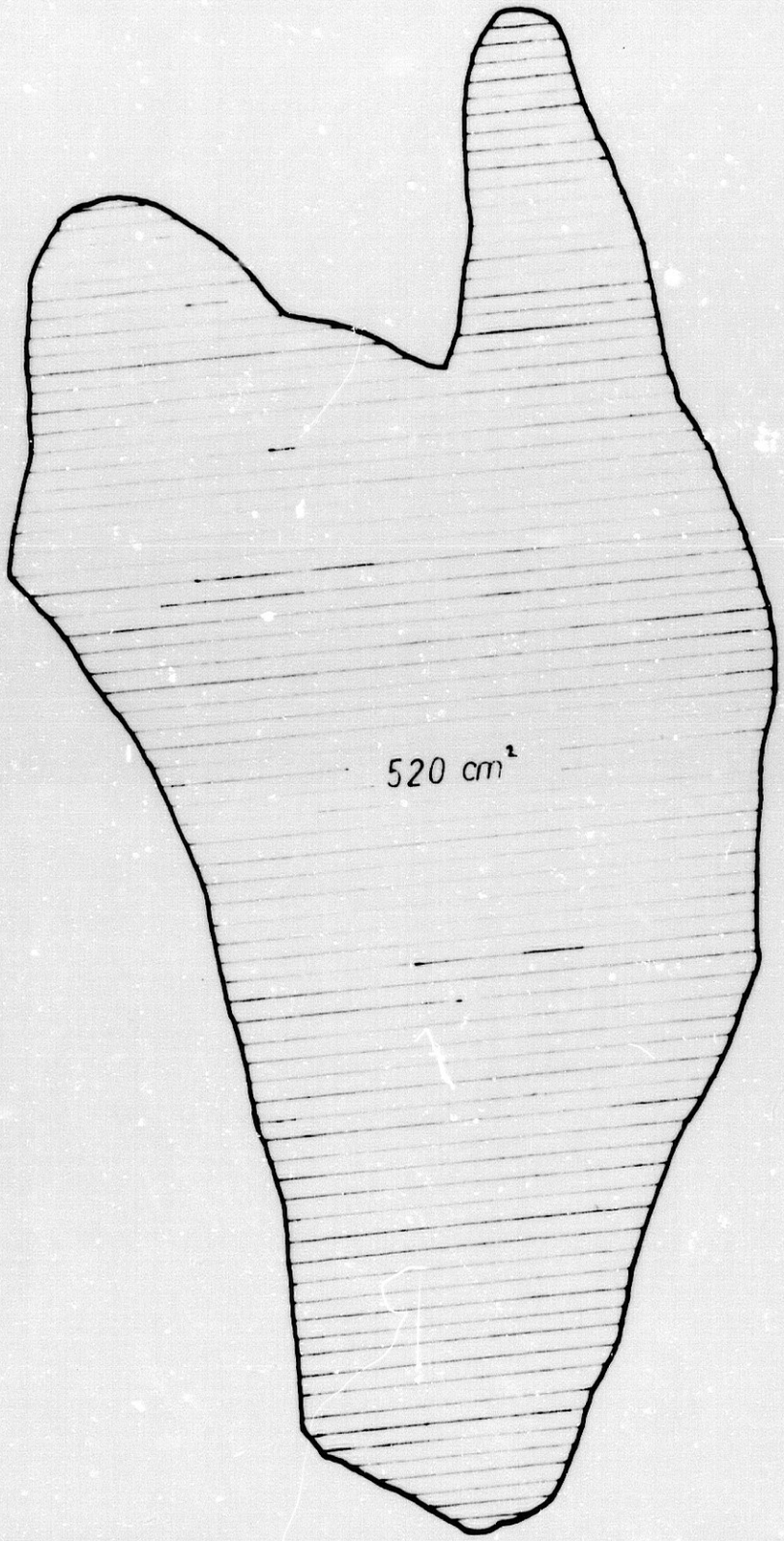
FOTO 12



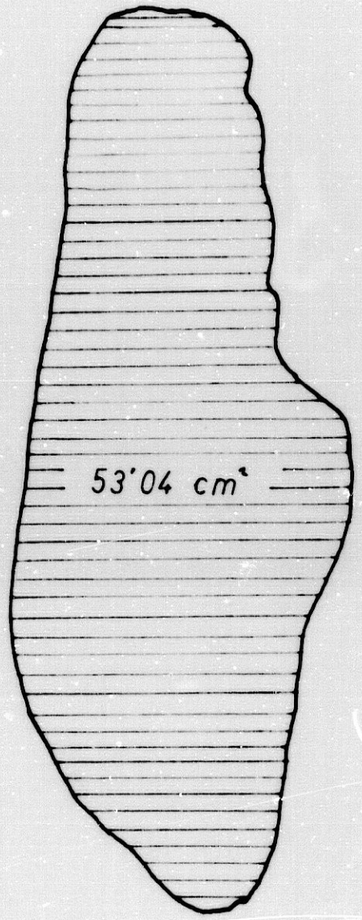
Paciente :		Ingreso: 21-2-79
S_o = 678'3 cm²	S_t = 337 cm²	Alta: 25-3-79
$V.M.R.C. = \frac{S_o - S_t}{S_o \times T} \times 100 = 1'525$		$V.M.A.C. = \frac{S_o - S_t}{T} = 10'34 \frac{cm^2}{dia}$



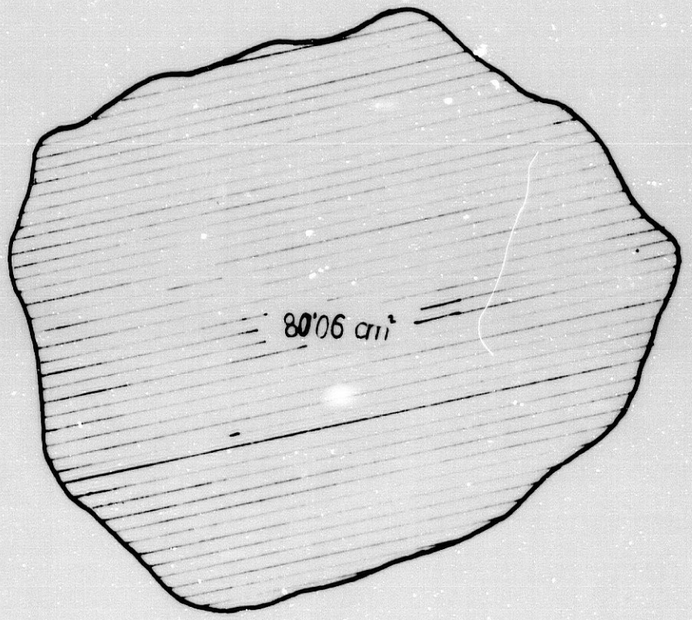
Paciente: A. G. R.	Ingreso:
S_o = 129'4 cm² S_f = 0 cm²	Alta:
$VMRC = \frac{S_o - S_f}{S_o \times T} \times 100 = 0'589\ cm^2$	$VMAC = \frac{S_o - S_f}{T} = 0'76\ \frac{cm^2}{día}$



Paciente : A. G. R.		Ingreso :
$S_o = 520\ cm^2$	$S_f = 40\ cm^2$	Alta :
$V.M.R.C. = \frac{S_o - S_f}{S_o \times T} \times 100 = 0'543$		$V.M.A.C. = \frac{S_o - S_f}{T} = 2'82\ \frac{cm^2}{dia}$

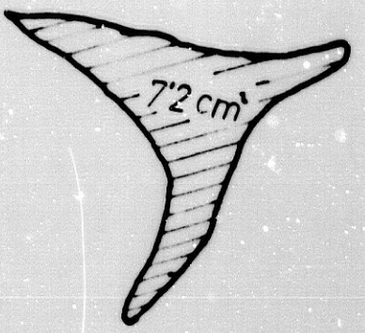


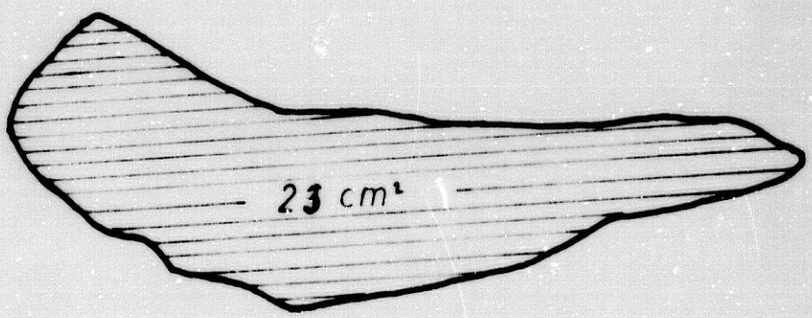
Paciente: M.R.L.		Ingreso: 1-3-79
S_o = 53'04 cm²	S_f = 53'04 cm²	Alta: 3-4-79
$VMRC = \frac{S_o - S_f}{S_o \times T} \times 100 = 0$		$VMAC = \frac{S_o - S_f}{T} = 0 \frac{cm}{dia}$



Paciente: C.R.O.		Ingreso: 1-3-79
S_o = 80'06 cm²	S_f = 0 cm²	Alta: 4-4-79
$V.M.R.C. = \frac{S_o - S_f}{S_o \times T} \times 100 = 2'94\ cm^2$		$V.M.A.C. = \frac{S_o - S_f}{T} = 2'35 \frac{cm^2}{dia}$

36'6 cm²


7'2 cm²


23 cm²

PLANIMETRO POLAR

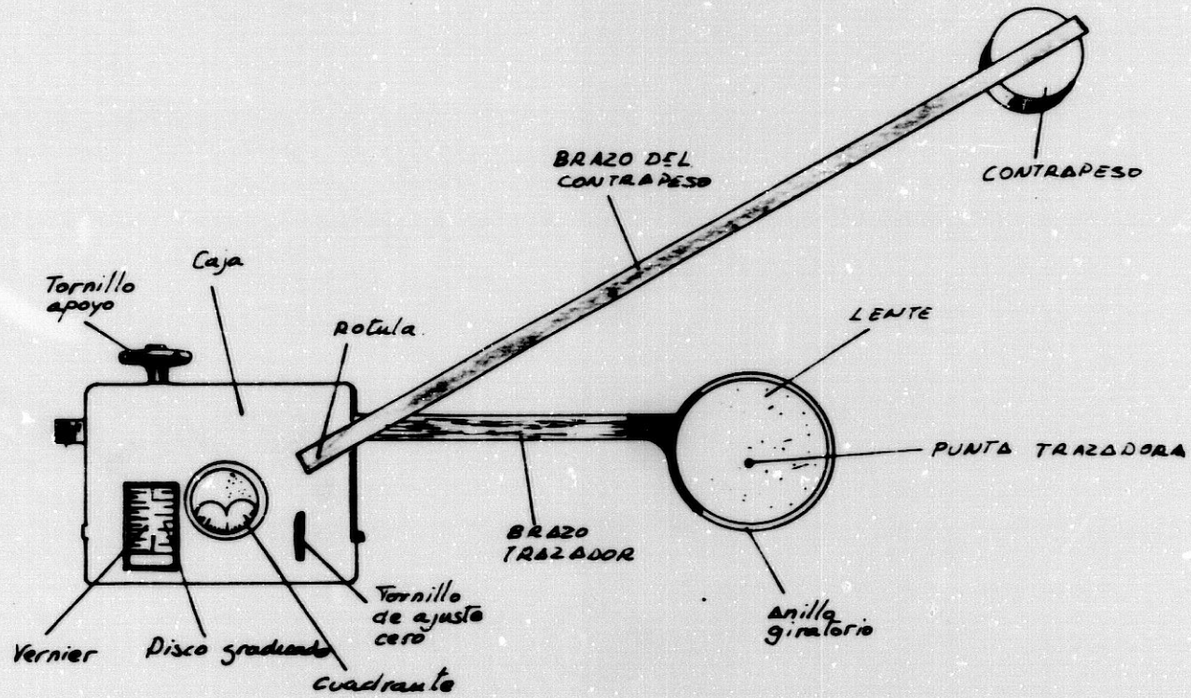


FOTO 13

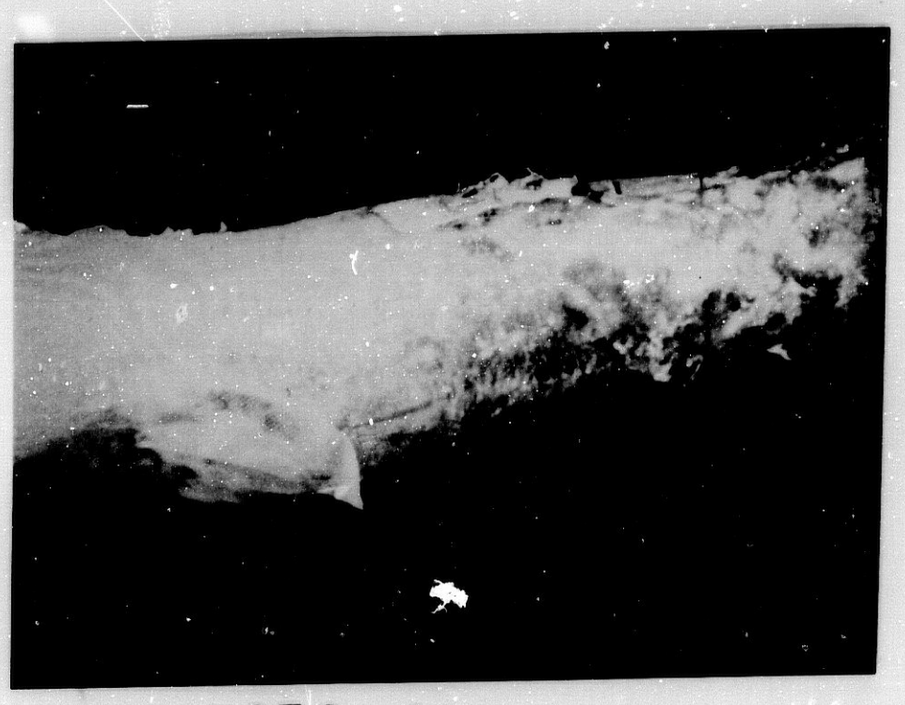


FOTO 14

FOTO 15

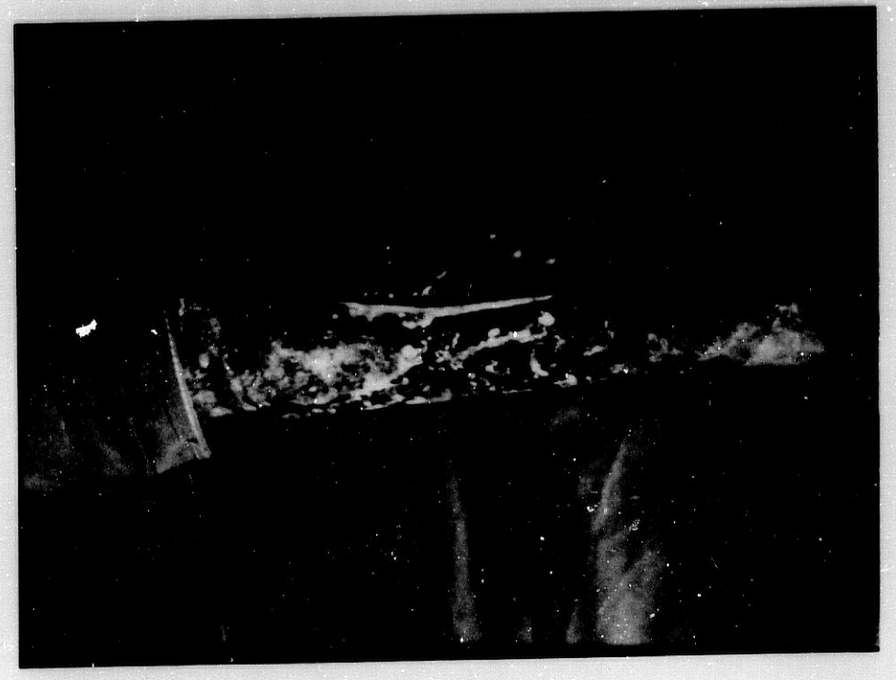


FOTO 16

FOTO 17

FOTO 18

FOTO 19

FOTO 20

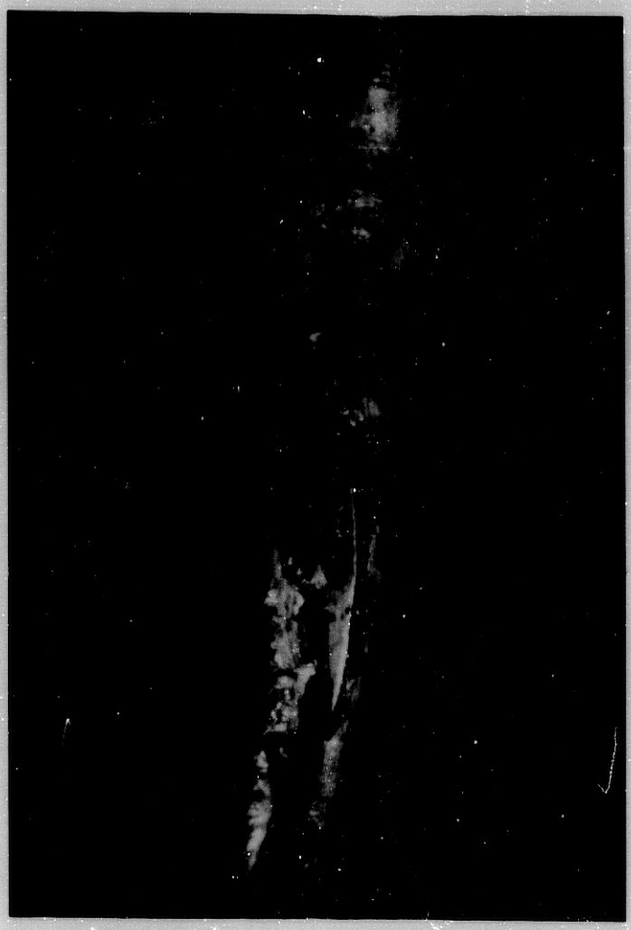


FOTO 21

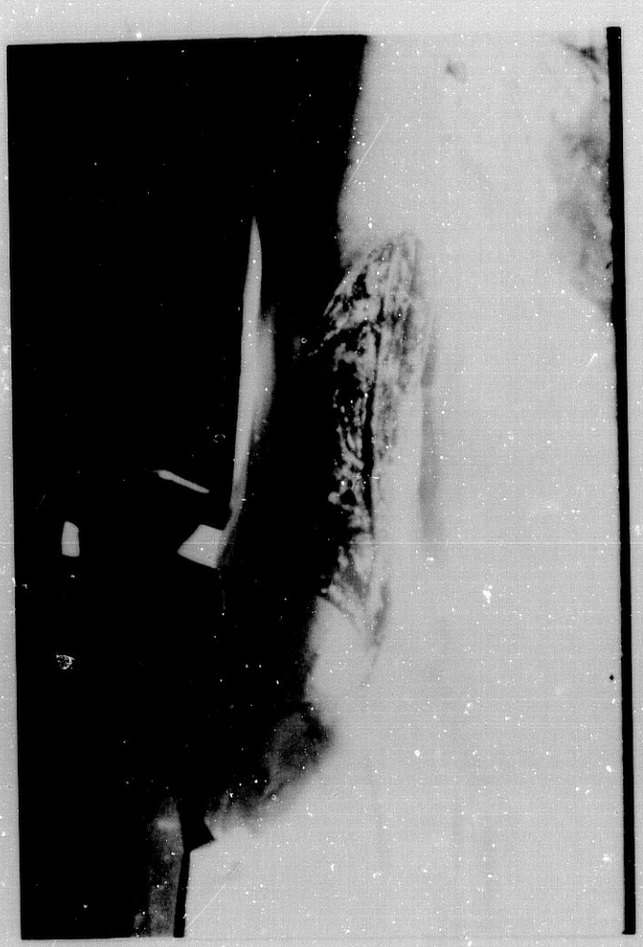
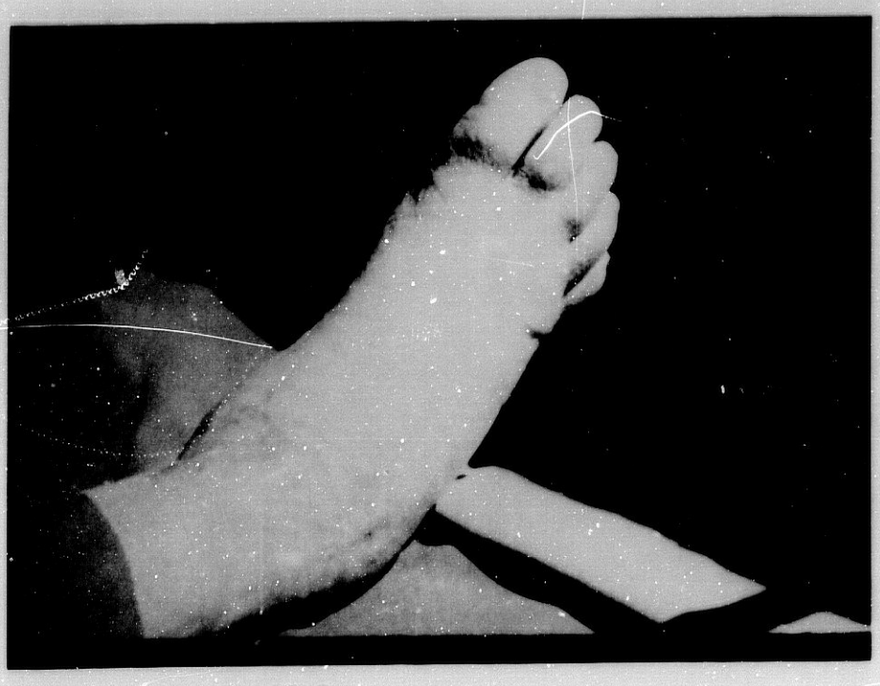


FOTO 22

FOTO 23

FOTO 24



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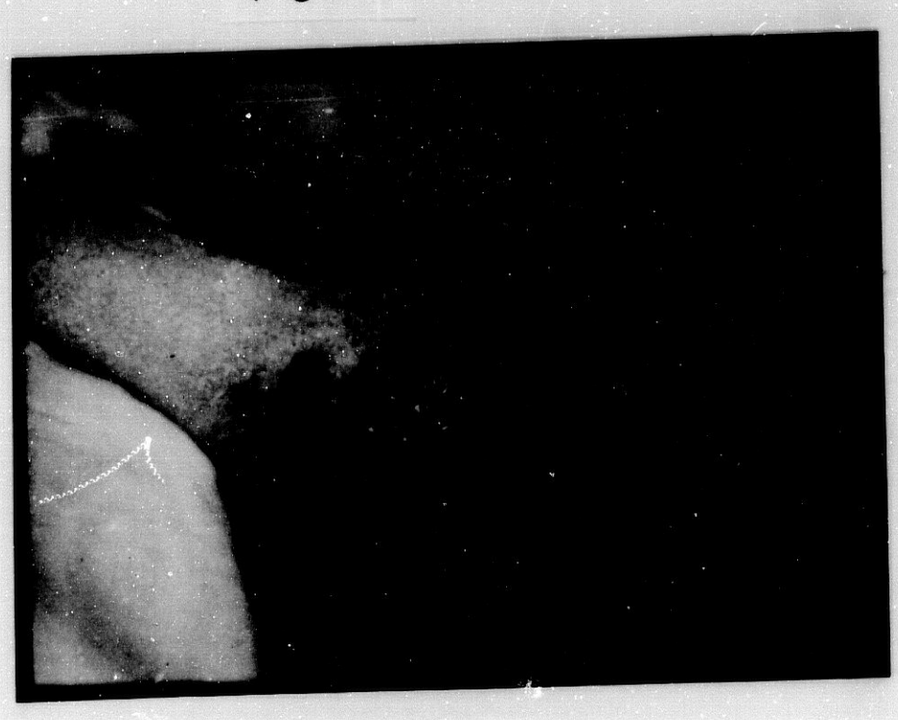

FOTO 27

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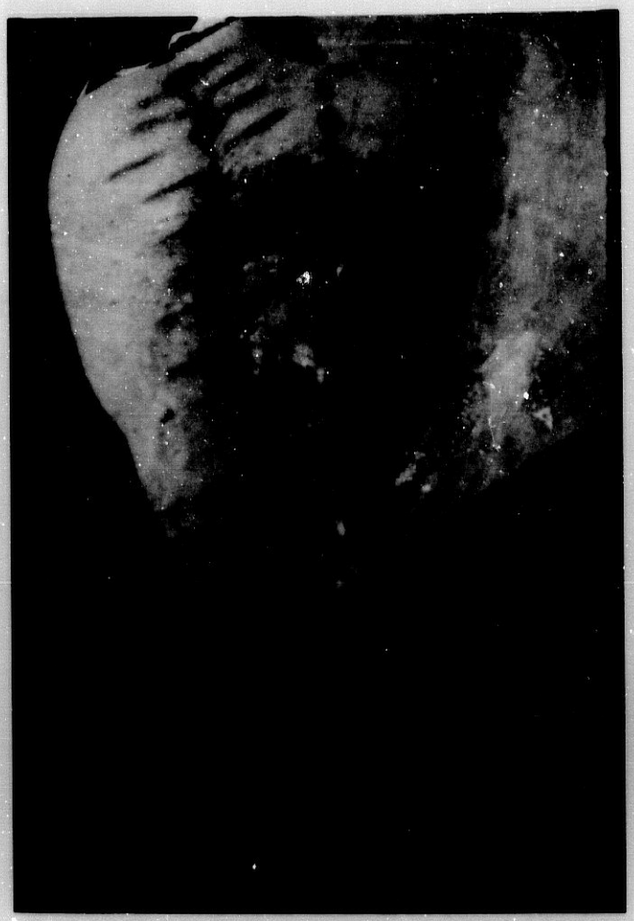

FOTO 41

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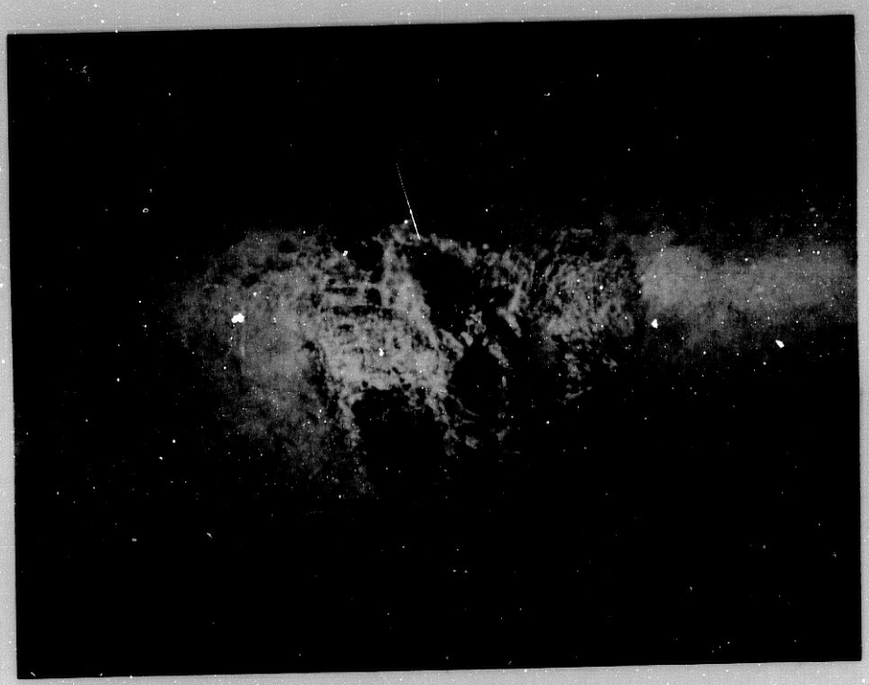

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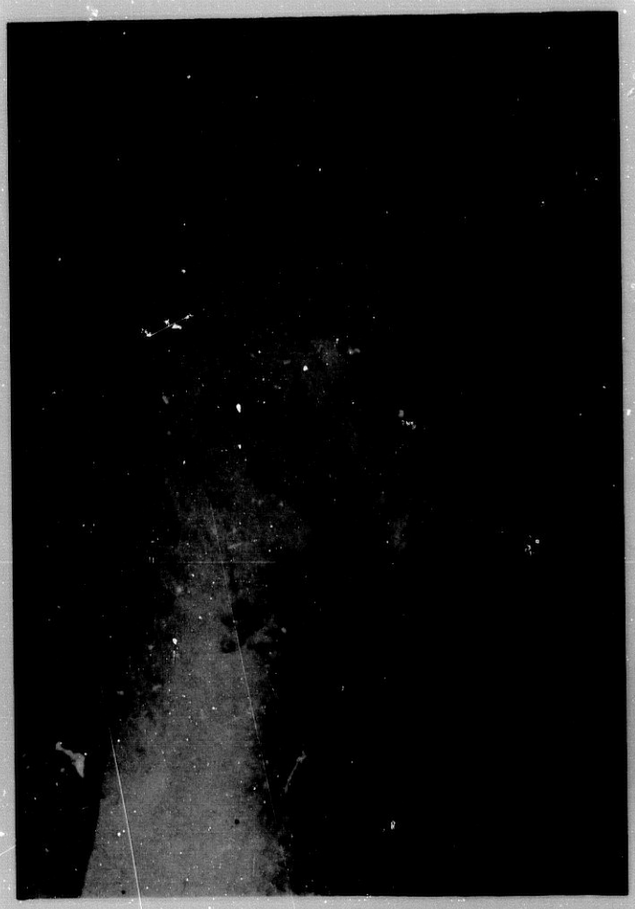

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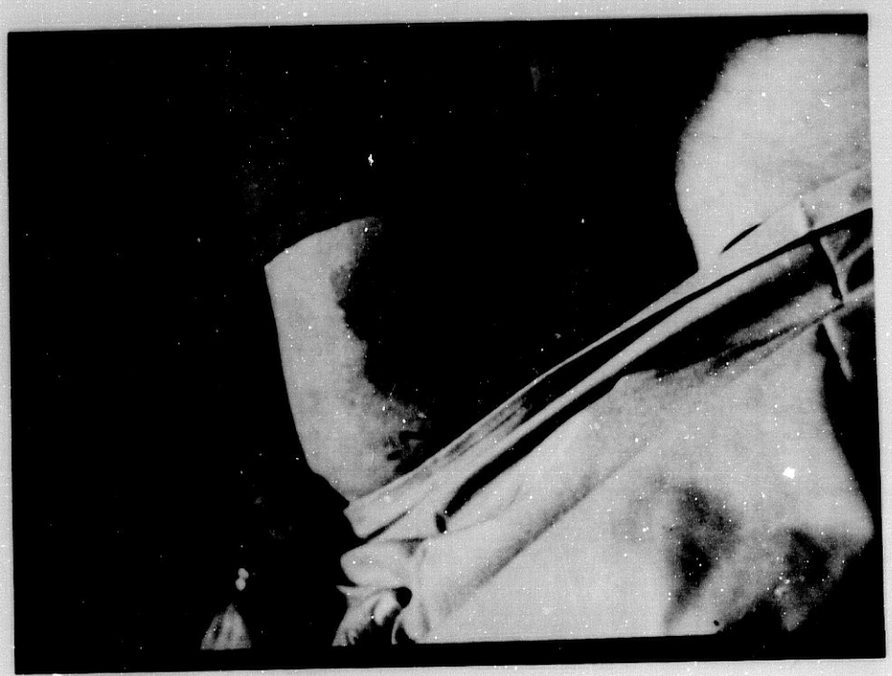

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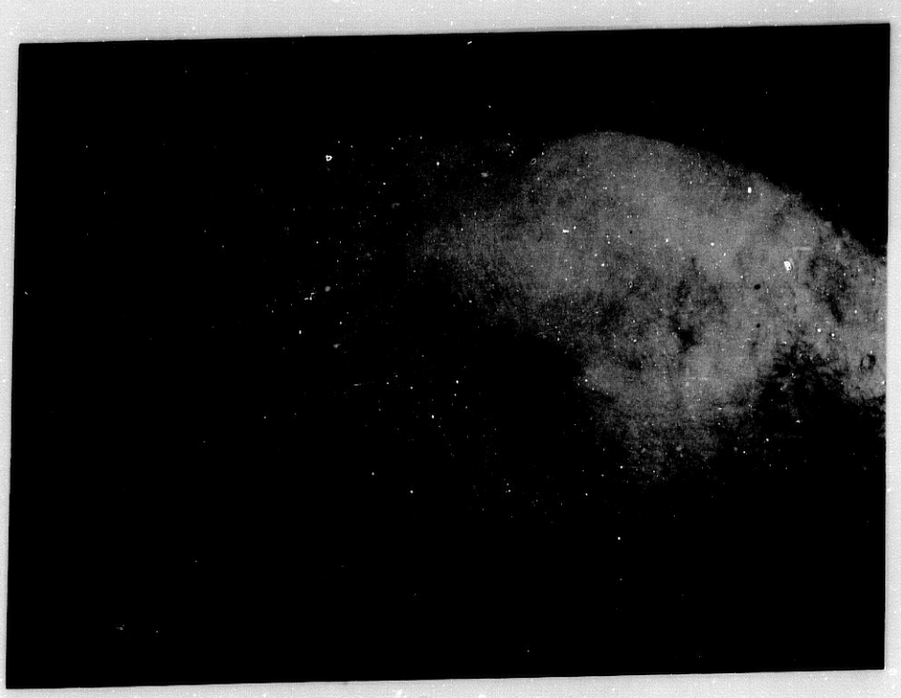

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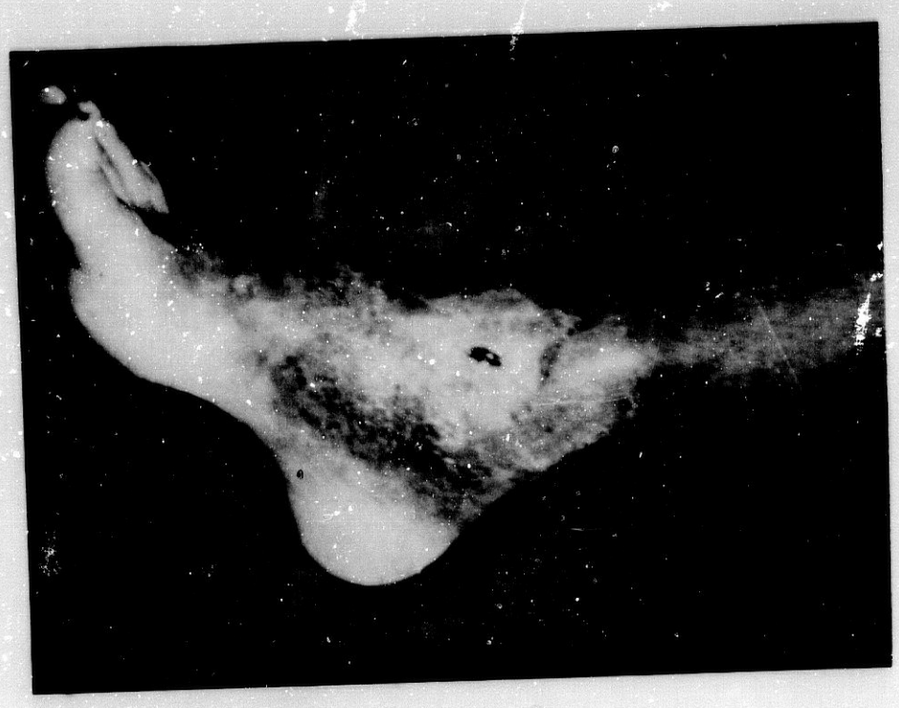

FOTO 62

6-2.- FASE EXPERIMENTAL

FOTO 1

FOTO 2

FOTO 3

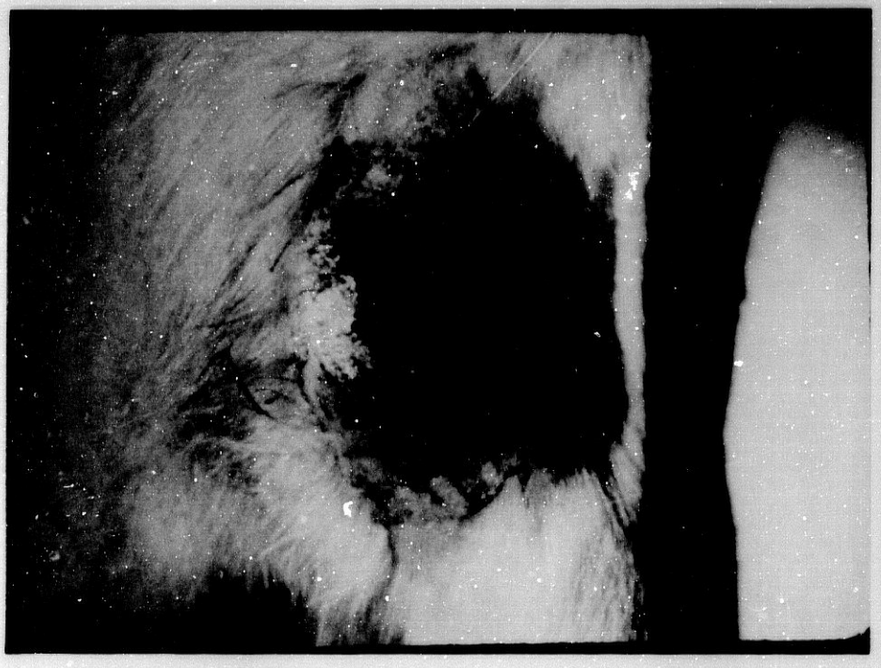

FOTO 4

FOTO 5

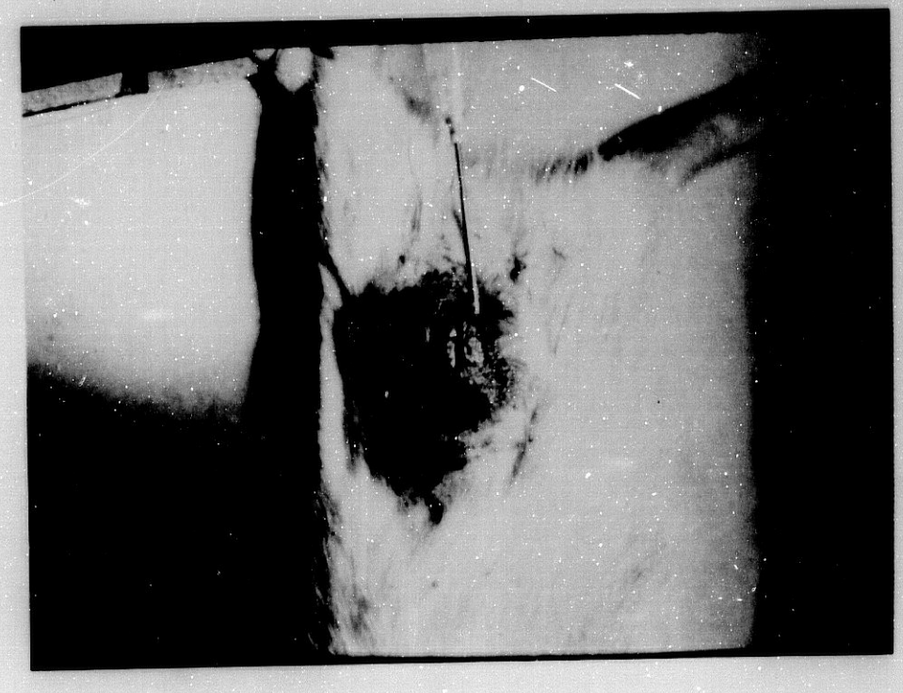

FOTO 6

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estéril B. Braun
Material Clínico, S.A.

FOTO 7

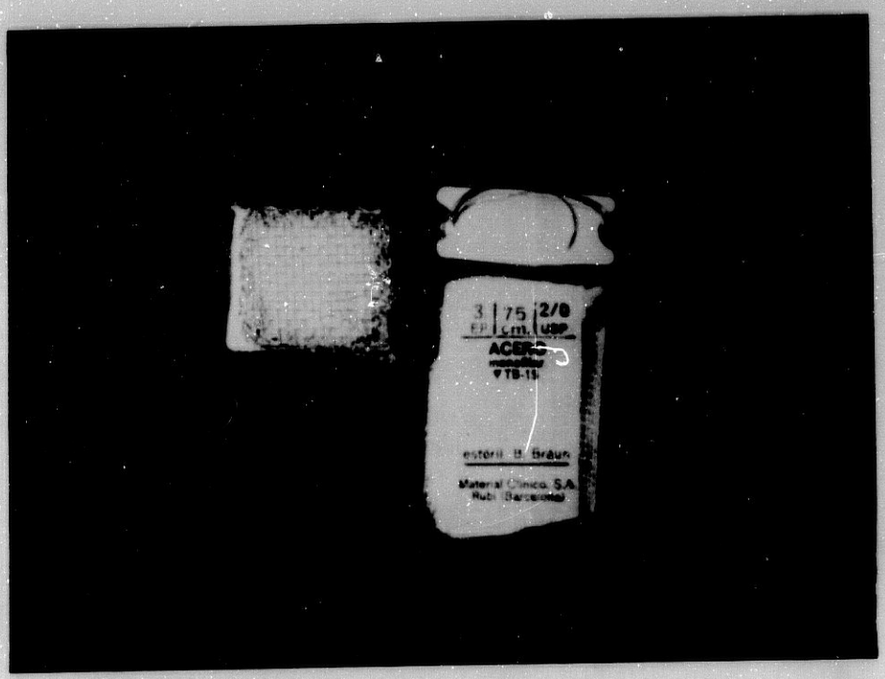
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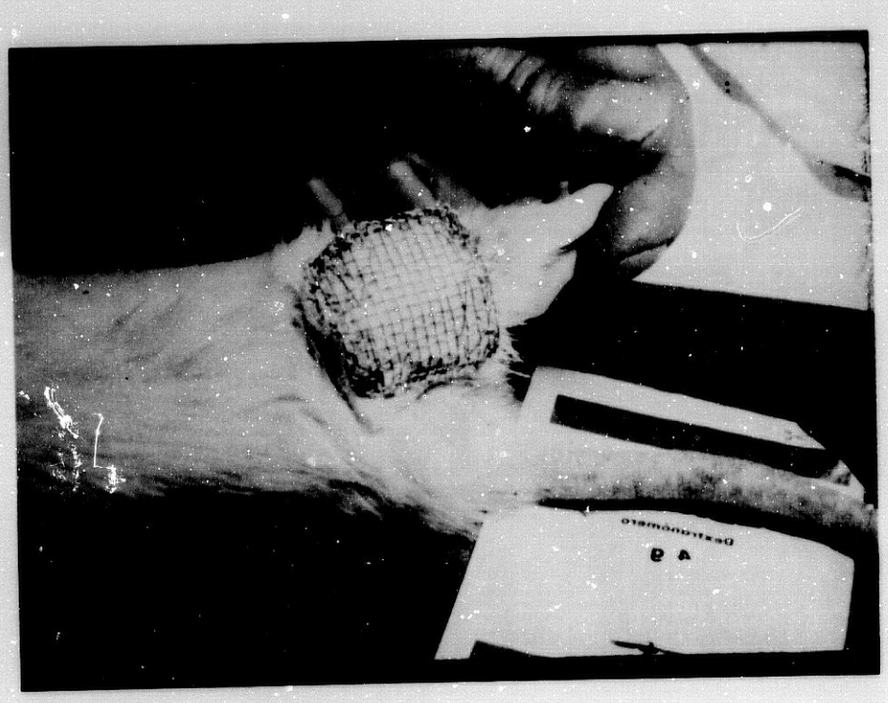
FOTO 8

FOTO 9

FOTO 10



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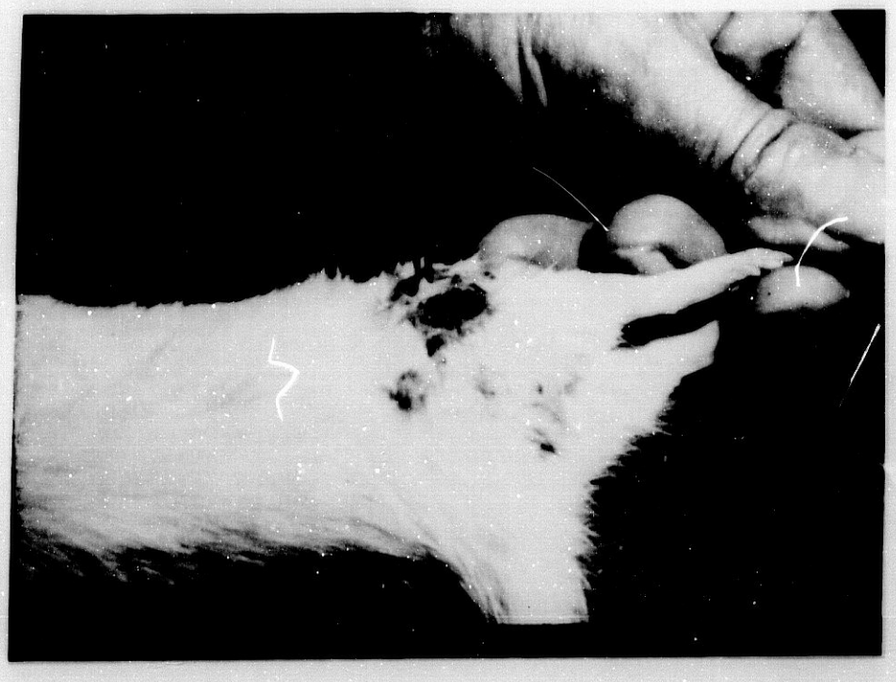

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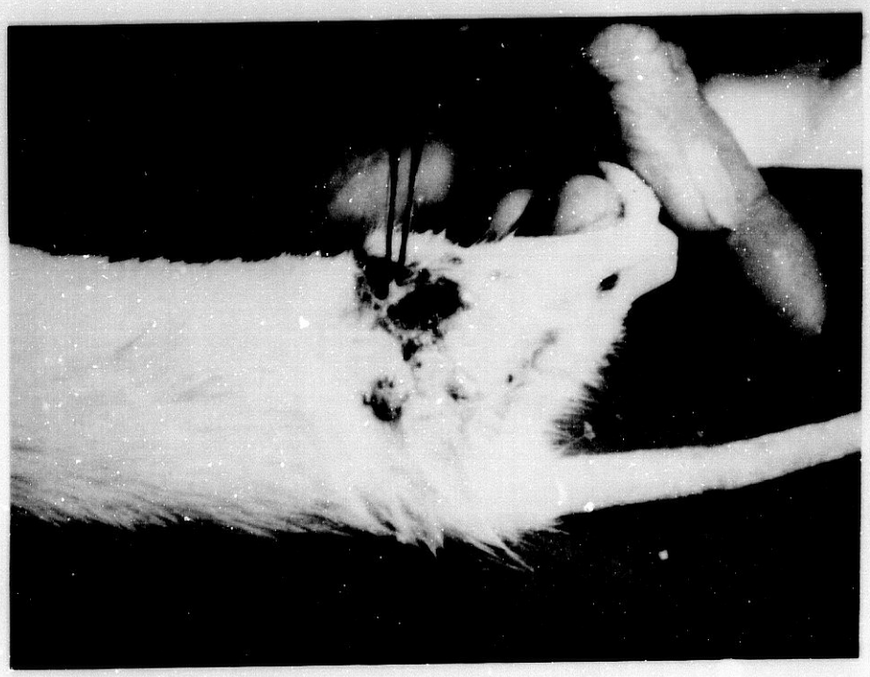

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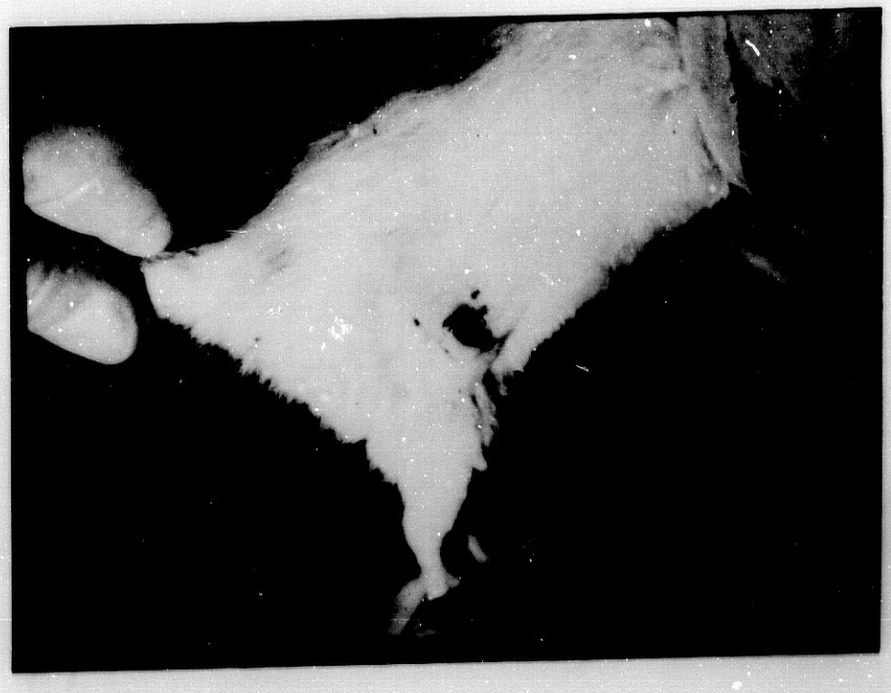

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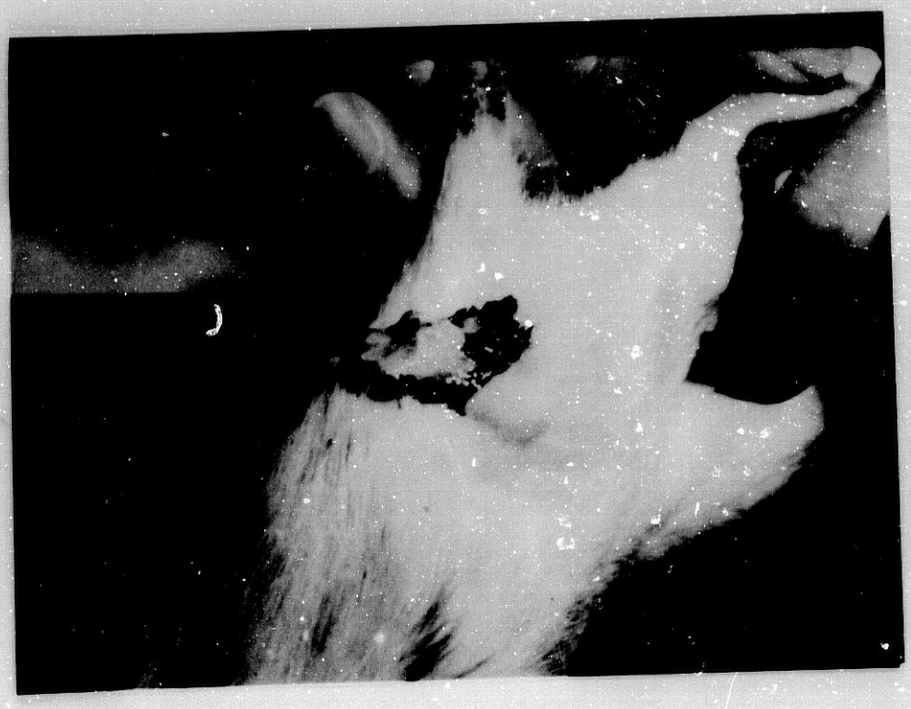

FOTO 21

AALTO, M. y KULONEN, E. (1974): Inhibition of protein - synthesis in tendon cells by extracts from experimental granulation tissue. FEBS Lett. 49,70.

AALTO, M., POTILA, M. y KULONEN, E. (1976): The effect- of silica- treated macrophages on the synthesis- of collagen and other proteins in vitro. Exp. -- Cell Res. 97, 193

ALARCON-SEGOVIA, D.; G., KERSHENOBICH, D. y ROJKIND, M. (1974): Treatment of scleroderma. Lancet.1,1054.

ABERCROMBIE, M. (1961): The bases of the locomotory behzviot of fibroblasts. Exp. Cell Res. suppl. 8,- 188.

ABERCOMBRIE, M. y AMBROSE, E. J. (1958): Interference - microscope studies of cell contacts in tissue -- culture. Exp. Cell Res. 15, 332.

ABERCROMBIE, M., FLINT, M. H. y JAMES, W. (1956): Wound contraction in relation to collagen formation in scorbutic guinea-pig. J. Embryol. exp. Morph. 4, 167.

ABERCROMBIE, M., HEAYSMAN, J. E. y PEGRUM, S. M. (1971) The locomotion of fibrosblasts in culture. IV. - Electron microscopy of the leading lamella. Exp- Cell Res. 67, 359.

ABERCROMBIE, M.; JAMES, D. W. y NEWCOMBIE, J. F. (1960) Wound contraction in rabbit skin, stidied by --

spliting the wound margin. J. Anat. (Lond) 94,--170.

ABERG M. HEDNER U. (1974): Fibrinolytisk aktivitet i --debrisan-behandlade sar. Svensk Kir 31: 5.

ABERG, M., HEDNER, U., JACOBSSON, S., OTHMAN, U. (1976) Fibrinolytic activity in wound secretions. Scand J. plast. reconstr. Surg. 10, 103-105.

ADAMS, D. O. (1975): The structure of mononuclear phagocytes. Differentiating in vivo. Am. J. Pathol 80 101.

ALEXANDER, J. W., ALTEMEIER, W. A., and KAPLAN, J. Z.:-(1967): Role of suture materials in the development of wound infection. Ann. Surg. 165:192,

ALEXANDER, J. W., FISHER, M. W., MACMILLAN, B. G., and-ALTEMEIER, W. A. (1969): Prevenyion of invasive-Pseudomonas infection in burns with a new vaccine. Arch. Sug. 99:249.

ALEXANDER, J. W., HEGG, M., and ALTEMEIER, W. A. (1968) Neutrophil function in selected surgical disorders. Ann. Surg. 168:447.

ALTEMEIER W. A. and BERRICH, E. J. (1971): Wound Sepsis and Dehiscence. In: Critical Surgical Illnes Hardy, J., editor. Philadelphia, Saunders, chap8

ALTEMEIER, W. A. and FURSTE, W. L.(1947): Gas gangrene-A collective review. Int. Abstr. Surg (Surg. Gy-

necol. Obstet.) 84:507.

ALTEMEIER, W. A. and FURSTE, W. L. (1949): Studies in - virulence of Clostridium welchii. Surgery 25:12

ALTEMEIER, W. A. and LEVENSON, S. (1970): Trauma workshop report: Infections, immunology, and gnotobiosis. J. Trauma 10:1084.

ALTEMEIER, W. A., CULBERTSON, W. R., FULLEN, W. D., and MCDONOUGH, J. J. (1969): Serratia marcescens septicemia: A new threat in surgery. Arch. Surg. -- 99:232.

ALTEMEIER, W. A. (1978): Determinants of Surgical Wound Infection. In: World Congress on Antisepsis. New York, PH 1.7.

ALTEMEIER, W. A., HILL, E. O., and FULLEN, W. D. (1969) Acute and recurrent thromboembolic disease: A -- new concept of etiology. Ann. Surg. 170:547.

ALTEMEIER, W. A. (1972): The significance of infection- in trauma. Bull. Am. Coll. Surg. 57:7.

ALTEMEIER, W. A., McDONOUGH, J. J., and FULLEN, W. D.-- (1971): Third-day surgical fever. Arch. Surg. -- 103:158.

ALTEMEIER, W. A., TODD, J. C., and INGE, W. W. (1967):- Gram-negative septicemia: A growing threat. Ann. Surg. 166:530.

ALLEN, J. F. and H. RASMUSSEN, Prostaglandin-and isopro

terenol- induced changes in the red blood cell-- membrane.(1971). Clin. Res. 19. 559.

AMBACHE, N. (1966). Biological characterization of, and structureaction studies on, smooth-muscle-con--- tracting hydroxy-acids. Mem. Soc. Endocrinol. 14: 19-28.

AMBACHE, N., L. KAVANAUGH, AND J. WHITING. (1965): Ef--- fect of mechanical stimulation on rabbits' eyes:- Release of active substance in anterior chamber- perfusates. J. Physiol., London 176-378.

AMBROSE, E. J. (1961): The movements of fibrocytes. Exp. Cell Res. Suppl. 8, 54.

ANDERSON, F. F., W. E. BARRET, AND B. N. CRAVER. (1949) A multiple bath arrangement for studying the res ponses of isolated tissues. Arch. Pharmacodyn. - 544-547.

ANGGARD, E., G. ARTURSON and C. E. JONSSON, (1970). --- Efflux of prostaglandis in lymph from scalded ti ssues. Acta physiol. scand. 80. 46A-47A.

ANGGARD, E., K. GREEN and SAMUELSON, (1965). Synthesis- of tritium- labelled prostaglandin E_2 and studies --- on its metabolism in guinea pig lung. J. biol Chem. 240.

ANGGARD, E. and C. E. JONSSON. (1971). Efflux of prosta glandins in lymph from scalded tissue . Acta phy

siol.scand.81. 440-447.

ANGGARD, E. JONSSON, C. E. (1971). Efflux of prostaglandins in lymph from scalded tissue. Acta Physiol. Scand. 81. 440.

ANGGARD, E., (1966). The biological activities of three metabolites of prostaglandin E_1. Acta Phisiol. - Scand. 66. 509-510.

ANGGARD, E. and H. BERGKVIST, (1970). Group separation- of prostaglandins on Sephadex LH-20. J. Chrom.48 542-544.

ANGGARD, E. and B. SAMUELSSON, (1966). Purification and properties of a 15-hidroxy prostaglandin dehydrogenase from swine lung. Arkiv f. Kemi.25.293-300

ANGGARD, E. and B. SAMUELSSON, (1970). Prostaglandins - in H. U. Bergmeyer (Ed.) (Methods of Enzymatic - Analysis.) 1049-1053.

ANGGARD, E., K. GREEN and B. SAMUELSSON, (1965). Synthesis of tritium labelled prostaglandin E_2 and studies on its metabolism in guinea pig lung. J. -- biol. Chem. 240. 1932-1940.

ANGGARD, E., U. BERGKVIST, B. HOCBERG, K. JOHANSSON, I. L. THON and B. UVNAS, (1963): Biologically active principles occurring on histamine release --- from cat paw, guinea pig lung and isolated rat - mast cells. Acta physiol. scand. 59. 97-110.

ARJONA, V., GARCIA DEL MORAL, R., MARQUEZ, H., AGUILAR-D. y DIAZ-FLORES, L. (1978): Linfomas cerebrales de origen primario (Microgliomatosis-Sarcoma de células reticulares). Estudio ultraestructural e histogenético. Morfol. Norm. Patol. Sec, B, 2,--197.

APPOS, J., HAMILTON, R. W., and KOROSTOFF, E. (1968).- Tensile strength in ischemic wounds in rats. --- Surg. Forum 19:505.

ARFORS K. E. (1974). Personal comunication.

ARMSTRONG, D., J. B. JEPSON, C. A. KEELE and J. W. STEWART, (1957): Pain-producing substance in human-inflammatory exudantes and plasma. J. Phisiol. - (Lond). 135. 350-370.

ARNESEN, H. GODAL. H. C. (1973): Studies on the thrombin clotting time. I. The influence of fibrino--gen degradation products. Scand J Haematol 10,--232.

ARONSEN, K. F., HAGERSTRAND. I. NORDEN, J. G. (1972).- Enzyme studies in man with extra-hepatic biliary obstruction. Acta Path Microbiol Scand A 80. 501

ARTURSON, G., HAFELIUS, L., JACOBSSON, S., y ROTHMAN, U. (1978): A new topical agent (Debrisan for the - early treatment of the burned hand. Burns nº 4: 225.

ARTURSON, G., HAMBERG, M. y SVENSSON, C. E. (1973). Prostaglandins in human burn blister fluid. Acta Physiol. Scand. 87, 270.

ARTURSON, G., JACOBSSON, S. y ROTHMAN, U. (1977). A new topical agent for the early treatment of the burned hand. To be published.

ARTHUR, R. P., and SHELLEY, W. B.(1959): The innervation of human epidermis, J. Invest. Derm., 32:397.

ARTURSON G. (1974): Prostaglandiner i sarsekret. Svensk Kir 31:6.

ARTURSON, G. and S. MELLANDER, (1964). Acute changes in capillary flitration and diffusion in experimental burn injury. Acta phisiol. scand. 62. 457---463.

ARTURSON, G., (1961): Pathophysiological aspects of the burn syndrome. Acta chir. scand. Suppl.274.

ASCHOFF, L. Y KIYONO, K. (1913): Uber Makrophagen. Verhandl. d. deut. Path. Gesell. Folia Hoem tol 15, 149.

ASTRUP, T., HENRICKSEN, J. Y KWAAN, H. C. (1967): Protease content and fibrinolytic activity of human--leukocytes. Blood, 29, 134.

ASTRUP, T. (1966): Tissue activators of plasminogen. --- Fed. Proc 25, 42.

AXEN, U., K. GREEN, D. HORLIN, and B. SAMUELSSON, (1971)

Mass spectrometric determination of picomole amounts of prostaglandins E_2 and F_2 using synthetic deuterium labelled carriers. Biochem. biophys Res. Commun. 45, 519-525.

BAILEY, A. J. (1967):Labile intermolecular cross-links in tendon collagen. Biochem.J. 105,34.

BAILEY, A. J. (1968): Intermediate labile intermolecular crosslinks in collagen fibres. Biochim. Biophys. Acta. 160, 447.

BAILEY, J. H. (1975): Stabilisation des fibres de collagéne et relations possibles avec les maladies héreditaires du tissu conjonctif. N. Press. Med.51 383.

BAILEY, A. J., FOWLER, L. J. y REACH, C. M. (1969): Identification of two interchain crosslinks of bone and dentine collagen. Biochem. Biophys.Res. Commum. 35, 662.

BAILEY, A. J. y REACH, C. M. (1971):The chemistry of the collagen cross-links: The absence of reduction of dehydrolysinonorleucine and dehydrohydroxylysinonorleucine in vivo. Biochem, J. 121,-257.

BAILEY, A. J. ; ROBINS, S. P. y BALIAN, G. (1974): Biological significance of the intermolecular cross links of collagen. Nature (Lond), 251, 105.

BAILEY, A. J. y SHIMOKOMAKI, M. S. (1971): age related-changes in the reducible cross-links of collagen FEBS Lett. 16, 86.

BALIAN, G., CLICK, E. M. y BORNSTEIN, P. (1971): Structure of rat skin collagen alfa-uno- CB8. Amino--acid sequence of the hydroxylamine-produced fragment HA1. Biochemistry. 10, 4470.

BAKER, H., and KLIGMAN, A. M. (1967): technique for estimating turnover time of human stratum corneum. Arch. Derm., 95:408.

BARBENEL, J. C., JORDAN, M. M., and NICOL, S. M., (1977) Incidence of Pressure Sores in the Greater Glasgow Health Board Area. Lancet, ii 548.

BARNES, M. J. (1973): Biochemistry of collagens from mineralized tissues, in Hard Tissue Growth, Repair and Remineralisation. Ciba Foundation Symposium. 11, pp. 247-261. Elsevier., Amsterdam.

BARTLETT, J. G., (1977): The normal flora. J. Surg. --- Pract.: 12-16.

BAUER, E. A., EISEN, A. Z. y JEFFEY, J. (1972): Regulation of vertebrate collagenase activity in vivo- and in vitro. J. Invest. Dermatol. 59, 50.

BAUER, E. A., STRICKLIN, G. P., JEFFREY, J. J. y EISEN, A. Z. (1975): Collagenase production by human -- skin fibroblasts. Biochem. Biophys. Res. Commun-

64, 252.

BAUR, P. S., LARSON, D. L., y STACEY, T. R. (1975): The observation of myofibroblasts in hypertrophic -- scars. Surg. Gynec. Obstet. 141, 22.

BECKER, S. W., PRAVER, L. L., and THATCHER, H. (1935):- An improved (paraffin section) method for the - dopa reaction. Arch. Derm. Syph., 31:190.

BECKER, U., NOWACK, H., GAY, S. y TIMPL, R. (1976): Production and specificity of antibodies against the aminoterminal region in type III collagen. Immunology 31, 57.

BELL, C. y McLEAN, J. R. (1973): The autonomic innervation of the rat testicular capsule. J. Reprod. Fert. 32, 253.

BELL, R. F., and KELLUM, R. E. (1967): Early formation of keratohyalin granules in rat epidermis. Acta dermatoven., 47:250.

BERG, R, A. y PROCKOP, D. J., (1973): Affinity column - purification of protocollagen proline hydroxylase from chick embryos and further characterization of the enzyme, J. Biol. Chem. 248, 1175.

BERG, R. A. y PROCKOP, D. J. (1973): Purification of -- (14 C) protocollagen and its hydroxylation by--- proly hydroxylase. Biochemistry, 12, 3395.

BERGSTROM, S., L. A. CARLSON, and J. R. WEEKS. (1968)--

The prostaglandins: A family of biologically---- active lipids. Pharmacol. Rev. 20: 1-48.

BERSTROM, S., F. DRESSLER, R. RYHAGE, B. SAMUELSSON and J. SJOVALL, (1962): The insolation of two fur--- ther prostaglandins from sheep prostate glands. Arkiv f. Kemi 19. 463-567.

BERGSTROM, S., F. DRESSLER, R. RYHAGE, B. SAMUELSSON and J. SJOVALL, (1962): Arkiv. Kemi, 19. 563.

BERGSTROM, S., RYHAGE, R., SAMUELSSON, B., and SJOVALL, J. , J. Biol. Chem., (1963): 238- 3555.

BERGSTROM, S. and SJOVALL, J. (1960): Acta, Chem, --- 14: 1963 14:1701.

BHATHAL, P. S. (1972): Presence of modified fibroblasts in cirrhotic livers in man. Pathology, 4, 139.

BERGSTROM, S., R. RYHAGE, B. SAMUELSSON and J. SJOVALL, (1963): The structures of prostaglandin E_1 F_{1Alfa} and F_{1Beta} J. biol. Chem. 238. 3555-3564.

BIEMPICA , L., and Montes, L. F. (1965): Secretory epithelium of the large axillary sweat glands, Am. J. Anat., 117:47.

BIERENS DE HAAN, B., ELLIS, H., and WILLIS, M., (1974) The role of infection in wound healing. Surg. -- Gynecol. Obstet. 138:693.

BIETH, J., PARTH, J. G. y MCTAIS, P. (1970): Fractionation and properties of the protease inhibitors -

of effusions. Clin Chim Acta 30:621.

BLAKE, P. A., MERSON, M. H., WEAVER R, E., (1979): Disease caused by a marine vibrio: Clinical characteristic and epidemiology. N. Engl. J. Med. 300:1-5.

BLANK, I. H., and SCHEUPLEIN, R. J. (1964): The epidermal barrier. In Rook, A., and Champion, R. H. --(eds): London, Cambridge University Press, Progress in the Biologic Sciences in Relation to --Dermatology. Vol. 2, 1. 245.

BLEEHEN, S. S., FATHAK, M. A., HORI, Y., and FITZPATRICK T. B. (1968): Depigmentation of skin with 4-isopropylcatechol, mercaptoamines, and other com---pounds. J. Invest. Derm. 50:103.

BLOCH, B., (1917):Das Problem der Pigmentbildung in der Haut, Arch, f. Derm. u. Syph., 124:129.

BOCK, P., BREITENECKER, G. y LUNGIMAYR, G. (1972):Kontraktile (Myofibroblasten) in der Lamina propria der Hodenkanalchen vom Menschen. Z. Zellforsch.-133, 519.

BODIAN, D. (1936): A new method for staining nerve fibers and nerve endings in mounted paraffin sec--tion. Anat. Rec., 65:89.

BORDI, C., ANVERSA, P. y VITALI-MAZZA, L. (1972): Ultrastructural study of a calcitonin-secreting tumor

cells and origin of amyloid. Virchows Arch. Abt. A. path. Anat. 357.

BORSTEIN, P. (1967): Comparative sequence studies of -- rat skin and tendon collagen. I. Evidence for -- incomplete hydroxylation of individual prolyl residues in the normal protein. Biochemistry, 6,-- 3082.

BORNSTEIN, P. (1969): Comparative sequence studies of - rat skin and tendon collagen. II. The absence of a short sequence at the amino terminus of the -- skin alfa-1 chain. Biochemistry, 8,63.

BORNSTEIN, P. (1974): The biosynthesis of collagen. Ann Rev. Biochem. 43, 567.

BORNSTEIN, P. (1974):The structure assembly of procolla gen. A review. J. Supramol. Struct. 2, 108.

BORNSTEIN, P., EHRLICH, H. P. y WYKE, W. (1972): Procollagen: Conversion of the precursor to collagen- by a neutral protease. Science. 175,544.

BORNSTEIN, P., MONSON, J. M., MURPHY, W. H. y KRUSE, N. J. (1975): The structure, synthesis, and secre-- tion of procollagen. En Extracellular Matrix influences on Gene Expression. Edit. H. C. Slavkin pág 95, Academic Press. New York.

BORNSTEIN, P. y PIEZ, K. A. (1966): The nature of the - intramolecular cross-links in collagen:The sepa-

ration and characterization of peptides from --- the croos-liks region of rat skin collagen. Biochemistry, 5, 3460.

BOTEL, U.:(1978): Debrisorb bei der Behandlung von -- Dekubital-Geschwuren. Eine empirische Studie. -- Fortschritte der Dedizin 31:1572.

BOUMA , B. N., HEDNER, U. y NILSSON, I. M. (1971): Typing of fibrinogen degradationproducts in urine in various clinical disorders. Scand J Clin Lab-Invest 2 :331.

BOURLOND, A., and VANDOOREN-DEFLORENNE, R. (1968): La-- membrane basale sous-epidermique:sa structure et son ultrastructures. Arch. belg. derm. syph., 24, 119.

BOSSE, M. D., and AXELROD, A. E. (1977): Cited in: LE-- VENSON, S. M., SEIFTER. E., and VAN WINKLE, W.- Jr. Fundamentals of Wound Management in Surgery. Nutrition. South Plainfield, N. J., Chirurgecom- p. 37.

BOUTET, M., LAGACE, R. y DELAGE, C. (1974): Les lésions du coeur droit dans le syndrome carcinoidien. -- Etude histochimique et ultrastructurale . Un. -- méd. Can. 103, 844.

BRAUN-FALCO, O., and RUPEC, M. (1968): Apokrine Schweis sdrüsen. In Marchionini, A. (ed): Handbuch der-

Haut-und Geschtskrankheiten, Ergänzugswerk. Vol-1, part 1, pág. 267. Berlin. Springer.

BREATHNACH, A. S., (1971): An atlas of the Ultrastructure of Human Skin. p. 174. London, Churchill.

BREATHNACH, A. S. (1971): An Atlas of the Ultrastuctures of Human Skin. p.330. London Churchill.

BREATNACH, A. S., and WYLLIE, L. M. A. (1965): Melanin in Langerhans cells. J. Invest. Derm., 45:401.

BREATHNACH, A. S., SILVERS, W. K., SMITH, J., and HEYNER, S. (1968): Langerhans cells in mouse skin experimentally deprived of its neural crest component. J. Invest. Derm. 50:147.

BRAUN-FALCO, O. and RUPEC, M. (1967): Die Verteilung der sauren Phosphatase bei mormaler und psoperistischer Verhornung. Dermatologica, 134-225.

BRIGGAMAN, R. A., DALLFORF, F. G. and WHEELER , C. E. (1971): Formation and origin of basal lamina and anchoring fibrils in adults human skin. J. Cell-Biol. 51:384.

BRODY, I. (1969): The modified plasma membranes of the-transition and horny cells in normal human epidermis as revealed by electron microscopy. Acta-dermatoven., 49:128.

BRODY, I. (1970): An electron microscopc study of the-fibrillar density in the normal human stratum -

corneum. J. Ultrastruct. Res, 30:209.

BRODY, J. S., FAGAN, H. M. MANALO, A. D.HU, C. A. y -- FRANZBLAU, C.(1975): Lung-lysyl oxidase and elastin synthesis during compensatory lung growth. - Clin, Res.23, 427A.

BROWN, S. I., and WELLER, C. A. (1970): Cell origin of-collagenase in normal and wounded corneas. Arch Opthalmol. 83:74.

BROWNELL , A. C. y VEIS, A. (1975): The intracellular-- location of the glycosylation of hydroxylysine - of collagen. Biochem. Biophys. Res. Commum. 63-- 371.

BRUNER-LORAND, J., PILKINGTON, T. R. E, y LORAND, L. - (1966): Inhibitor of fibrin cross-linking: Relevance for thrombolysis. Nature 210, 1273.

BULLOUGH, W. S., and LAURENCE, E. B. (1964): Miotic control by internal secretion: the role of the chalone-adren line, complex. Exp. Cell Res. 33:176.

BUNYAN, J. (1941): Treatment of burns and wounds by envelope method. Br. Méd. J. 2,1.

BURGESON, R. E., ALDI, F.A.E. KAITILA, I.I. y HOLLISTER D. W. (1976): Fetal membrane collagens: identification of two newa chains. Proc. Natl. Acad, Sci USA, 73, 2579.

BURKE, J. F., MORRIS, P. J., and BONDOC, C. C. (1969)--

The effect of bacterial inflammation on wound-healing. In: Dunphy, J. E., and VAN WINKLE, W.- Repair and regeneration. New York, McGRAW-HILL,- pp. 19-30.

BURKE, J. F. (1961): The effective period of preventive antibiotic action on experimental incisions and-dermal lesions. Surgery 50:161.

BURRIDGE, K. y BRAY, D. (1975): Purification and structural analysis of myosin from brain and other -- non-muscle tissues. J. Mol. Biol. 99,1.

BUTLER, W. T. (1968): Partial hydroxylation of certain-lysines in collagen. Science. 161,796.

BUTLER, W. T. (1972): The structure of alfa-1 -CB3, a - cyanogen bromide fragment from the central por-- tion of the alfa-1 chain of rat collagen. Bio-- chem. Biophys. Res. Commun.48, 1540.

BUTLER, W. T. y CUNNINGHAM, L. W. (1966). Evidence for-the linkage of a disaccharide to hydroxylysine - in tropocollagen. J. Biol. Chem. 241,3882.

BYERS, P. H. CLICK, E. M. HARPER, E. y BORNSTEIN, P. -- (1975): Interchain disulfide bonds in procollagen are located in a large COOH-terminal domain. -- Proc. Natl. Acad. Sci. USA, 72, 3009.

BYGDEMAN, M. (1964). Acta Phisiol Scand, 63,Suppl242.

BYGDEMAN, M. and ELIASSON, R. Med Expll,9 (1963) 409.

BYGDEMAN, M. and SAMUELSSON, B. (1966): Analyses of --- prostaglandins in human semen. Prostaglandins and related factors 44. Clin. chim. Acta. 13:465-474

BEWICK, M. and ANDERSON, J. (1978): A new method for -- treating infected wounds. Studies on the dextranomer (Debrisan): Case reports. Clinical Trials Journal 15:120.

CALCOTT, M. A. y MULLER EBERHARD, H. J. (1972): CIq protein of human complement. Biochemistry, 11, 3443

CANNON, P. R. (1950): Recent advances in nutrition with particular reference to protein metabolims. Kansas University Press (No, 14 of the Porter Lecture Series).

CARDINALE, G. J., RHOADS, R. E. y UDENFRIEND, S. (1971) Simultaneous incorporation of 180 into succinate and hydroxyproline catalyzed by collagen proline hydroxylase. Biochem. Biophys. Res. Commun 43 537.

CARNEIRO, J. y LEBLOND, C. P. (1959): Role of osteoblast and odontoblast in secreting the collagen of bone and dentine as shown by radioautography in -- mince given tritium-labelled glycin. Exp. Cell - Res. 18, 291.

CARRINGTON, S. G., and WINKELMANN, R. K., (1969): Ultra structure of histiocytes in cutaneous pathology.

J. Invest. Derm. 52:572.

CASHION, P. D., SKOBE, Z., and NALBANDIAN, J. (1969):-- Ultrastructural observations on sebaceous glands of the human oral mucosa (Fordyce's disease), J. Invest. Derm., 53:208.

CAUNA, N., and ROSS, L. L. (1960): The fine structure - of Meissner's touch corpuseles of human fingers J. Biophys. Biochem. Cytol., 8:467.

CERISE , E. J., PIERCE, W. A., and DIAMOND, D. L. (1970) Abdominal drains, their role as a source of in-- fection following splectomy. Ann. Surg. 171: 764 67.

CHESNEY, C. M. HARPER, E. y COLMAN, R. W. (1974): Human platelet collagenase. J. Clin. Invest. 53, 1647.

CHURG, A. M. y KAHN, L. C. (1977): Myofibroblasts and-- related cells in malignant fibrous and fibrohistiocytic tumors. Human Pathol. 8, 205.

CHUNG, E., KEELE, E. M. y MILLER, E. J. (1974): Isola-- tion and characterization of the cyanogen bromide peptides from the alfa-1 (III) chain of human collage, Biochemistry 13, 3459.

CHUNG, E., KINSEY, R. W., y MILLER, E. J. (1975): Bio--- synthesis of type III collagen: Relative insolubility of the molecules synthesized in the pre-- sence of a lathyrogen. En: Extracellular Matrix-

Influences on Gene Expresion, H. C. Slavkin),--- Págs. 285-291. Edit. Academic Press, New York.

CHUNG, E. y MILLER, E. J. (1974): Collagen polymorphism Charaterization of molecules with the chain composition alfa-1 in human tissues Science,183, -- 1200.

CHURCH, R. L. TANZER, M. L. y PFEIFFER, S. E. (1973):-- Collagen and procollagen production by a clonal-line of Schwann, cells. Proc. Natl. Acad. Sci. - USA. 70, 1943.

CHVAPIL, M. HURYCH, J., and EHRLICHOVA, E. (1968): The-influence of various oxygen tensions upon proline hydroxylation and the metabolims of collagenous-and non-collagenous proteins in skin slices. Z.- Phisiol. Chem. 349-211.

CHVAPIL, M. (1974): Zinc and wound healing. In: Zeder-- feldt. B. Symposium on Zinc, Lund Sweden, A. B.- Tika,

CLARK, W. H., Jr., WATSON, M. C., and WATSON, B. E. M.- (1961): Two kinds of clear cells in the human--- epidermis. Am. J. Path., 39:333.

CLICK, E. M. y BORNSTEIN, P. (1970): Isolation and characterization of the cyanogen bromide peptides-from the the alfa-1 and alfa-2 chains of human-skin collagen. Biochemistry. 2, 46, 99.

COCEANI, F., and L. S. WOLFE. (1966): On the action -- of prostaglanding E_1 and prostanglandin from --- brain on the isolated rat stomach. Can.J. Phisiol. Pharmacol. 44:933-950.

COCEANI, F. C. PACE-ANCIAK, F. VOLTA and L. S. WOLFE -- (1967): Effect of nerve stimulation on prosta--- glandin formation and release from the rat sto-- nach. Amer. J. Phisiol. 213. 1056.

COCEANI, F. and L. S. WOLFE,. (1965): Ptostaglandins in brain and the release of prostaglandins-like compounds from the cat cerebellar cortex. Canad. J. Phisiol. Pharmac, 43: 445-450.

COCHRAN, A. J. (1970): The incidence of melanocytes in-normal skin. J. Invest. Derm. 55:65.

COPEMAN, P. W. M., and RYAN, T. J. (1971): Cutaneous angiitis. Brit. J. Derm. 85:205.

COOPER, J. H., (1958): Microanatomical and histochemical observations on the dermal-epidermal junction. - Arch. Derm. 77:18.

COOPER, G. W., y PROCKOP, D. J. (1968): Intracellular - accumulation of protocollagen and extrasion of-- collagen by embryonic cartilage cells. J. Cell.- J. Cell. Biol. 38, 523.

COOPER F, H. y GOODMAN, M. D. (1974):Multilayering of - the capillary basal lamina in the granular cell-

tumor. A marker of cellular injury. Hum. Path.-- 2, 327.

CORMIA, F. E. (1963): Vasculature of the normal scalp.- Arch. Derm. 88:692.

CRUICKSHANK, C. N. D., and HARCOURT, S. A. (1964): Pigment donation in vitro. J. Invest. Derm., 42:183

CRUSE, J. P. E. and FOORD, R. (1973): A fiveyear pros-- pective study of 23,649 surgical wounds. Arch. - Surg. 107:206.

CRUNKHORN, P. and A. L. WILLIS, (1971): Cutaneous reaction to intradermal prostaglandins. Brit. J. Pharmacol. 41: 49-56.

CRUNKHORN, P. and A. L. WILLIS, (1969): Actions and interactions of prostaglandins adminstered intra-- dermally in rat and in man. Brit. J. Pharmacol.- 36, 316-317.

CUNNINGHAM, L. W. y FORD, J. D. (1968): A comparasion - of glycopeptides derived from soluble and insoluble collagens. J. Biol. Chem. 243, 2390.

CUTRONEO, K. R. y COUNTS, D. F. (1975): Anti-inflammatory steroids and collagen metabolims glucocorticoid-mediated alterations of prolyl hydrox, lase activity and collagen synthesis. Mol Pharmacol.11, 632.

CUTRONEO, K. R. GUZMAN, N. A. y SHARAWY, M. M. (1974):-

Evidence for a subcellular vesicular site of collagen prolyl hydroxylation. J. Biol. Chem. 249, 5989.

DAGHER, F. J., ALONGI, S. V. and SMITH, A. (1978): Bacterial studies of log ulcers. Angiology 29:641-

DANIELS, J. R. y CHU, G. H. (1975): Basement membrane--collagen of renal glomerulus. J. Biol. Chem. 250 3531.

DANIELSEN, L. y KOBAYASI, T. (1972): Innat elastic lamina of gastric arteries in pseudoxanthoma elasticum. Acta. Pathol. Microbiol. Scand. 80, 697.

DAVIDSON, J. M. y BORNSTEIN, P. (1975): Evidence for -- multiple steps in the limited proteolytic conversion of procollagen to collagen. Fed. Proc 34,-- 562.

DAVISON, J. M., McENEANY, L. S. G. y BORNSTEIN, P. (1975 Intermediates in the limited proteolytic conversion of procollagen to collagen. Biochemistry, - 14, 5188.

DAVIS, N. R. y BAILEY, A. J. (1971): Chemical synthesis of the reduced form of an intermolecular cross-- link of collagen: A re-evaluation of the struc-- ture of syndesine. Biochem. Biophys. Res. Commun 45, 1416.

DAVIS, M. J., and LAWLER, J. C., (1958): The capillary-

circulation of the skin. Arch, Derm. 77:690-----

DAVIDSON, A. I. G., CLARK, G., and SMITH, G. (1971) Postoperative wound infecction: A computer analysis Br. J. Surg. 58:333.

DE BELDER, A. N., (1975): Personal comunication.

DEHM, P., JIMENEZ, S. A., OLSEN, B. R. y PROCKOP, D. J. (1972): A transpot form of collagen from embryonic tendon: Electron microscopic demonstration-- of an NH_2-terminal extension and evidence suggesting the presence of cystine in the molecule. -- Proc. Natl. Acad. Sci. USA, 69, 60.

DEHM, P. y PROCKOP, D. J. (1972): Time lag in the secretion of collagen by matrix free tendon cells and inhibition of the secretory process by colchicini and vinblastine. Biochim. Biophys. Acta. 264 375.

DERMER, G. B., LUE, J. y NEUSTEIN, H. B. (1974): Comparison of surface material, cytoplasmic filaments and inter cellular junctions from untransformed- and two mouse sarcoma virus-transformed cell lines. Cancer Res. 34, 31.

DESHMUKH, K. Y NIMNI, M. E. (1973): Effects of lysosomal enzymes on the type of collagen synthesized by bovine articular cartilage. Biochem. Biophys Res. Commun. 53, 424.

DEVIS, R. y JAMES, D. W.(1964): Close association between adult guinea-pig fibroblast in tissue culture, studiend with the electron microscope. J. Anat. 98, 63.

DIEGELMANN, R. F., BERNSTEIN, L. y PETERKOFSKY, B. (1973) Cell-free collagen synthesis on membrane-bound polysomes of chick embryo connective tissues and the localization of prolyl hydroxylase on the polysome-membrane complex J. Biol. Chem. 248, 6514.

DIEGELMENN, R. F. y PETERKOFSKY, B. (1972): Inhibition of collagen secretion from bone and cultured fibrosblasts by microtubular disruptive drugs. Proc Natl. Acad.Sci. USA, 69, 892.

DINES, D. E. ELVEBACK, L. R. & McCALL. J. T. (1972): Zinc, copper and iron content of pleural fluid in bening and neoplastic disease. Thorax, 27, 368

DOBSON, R. L., FORMISANO, V., LOBITZ, W. C., Jr., and BROPHY, D.: Some histochemical observations on the human eccrine sweat gland. III. The effect

DOBSON, R. L., and SATO, K. (1972): The secretion of salt and water by the eccrine sweat gland. Arch-Derm., 105:366.

DONOFF, R. B., McLENNAN, J. E. y GRILLO, H. C. (1971):- Preparation and properties of collagenases from-

epithelium and mesenchyme of healing mammalian-- wounds. Biochim. Biophys. Acta, 227, 639.

DIAZ-FLORES, L. (1979): Anatomia Patológica General-I.- Imprime talleres Arte J. Juberias. Maracena. Granada. España.

EBNER, H. (1968): Beitrang zum Ehlers-Danlos Syndrom. Z. Haut, 43:177.

EDERY, H. and G. P. LEWIS, (1963): Kinin activity and - histamine in lymph after tissue injury. J. Physiol(Lond). 169. 568-583.

EDITORIAL, (1978): Treating pressure sores. British Medical Journal I: 1232.

EDMONDS. J. F., E. BERRY and J. II. WYLLIE, (1969): Release of prostanglandins caused by distention -- of the lungs. Brit. J. Surg. 56. 622-623.

EDWARDS, JR. W. G., G. G. STRONG and J. C. HUNT, (1969) A vasodepressor lipid resembling prostaglandins- E_2 (PGE_2) in the renal venous blood of hypertensive patiensts. J. Lab. clin. Med. 74. 389-399.

EDWARDS, L. C. and DUNPHY, J. E. (1957): Methionine in wound healing during protein starvation . In: -- Williamson, M. B., ed. The Healing of Wounds. -- McGRAW-HILL, pp.40-70.

EHRLICH, H. P. y BORNSTEIN, P. (1972): microtubules intranscellular movement of procollagen. Nature --

(New Biol.), 238, 257.

EHRLICH, H. P., ROSS, R. y BORNSTEIN, P. (1974): Effects of antimicrotubular agents on the secretion of - collagen, a biochemical and morphological study- J. Cell. Biol. 62, 390.

EISEN, A. Z. and GROSS, J. (1965): The role epithelium- and mesenchyme in the production of a collagenolytic enzyme and a hyaluronidase in the anuran - tadpole. Dev. Biol. 12:408.

EISEN , A. Z. (1969): Human skin collagenase: Localization and distribution in normal human skin. J.- Invest. Dermatol. 52, 442.

EISEN , A. Z., BAUER, E. A. y JEFFREY, J. J. (1971): Human skin collagenase: The role of serum alpha--- globulins in the control of activity in vivo and in vitro. Proc. Natl. Acad. Sci. USA. 68, 248.

EISEN,A. Z., BLOCH, K. J. y SAKAI, T. (1970): Inhibition --of human skin collagenase by human serum. J. Lab. Clin. Med. 75, 258.

EISEN, A. Z. y GROSS, J. (1965): The role of epithelium and mesenchyme in the production of a collagenolytic enzyme and a hyaluronidase in the anuran-- tadpole. Der. Biol. 12, 408.

ELIASSON, R. (1959): Acta Physiol. Scand., Suppl. 158.

ELLIS, R. A., (1967): Eccrine, sebaceous and apocrine -

glands. In Zelickson, A. S. (ed): Ultrastructures of Normal and Abnormal Skin, p. 132.Philadelphia Lea and Febiger,

EMERY, J. L. and McMILLAN, M. (1954): observations on the female sex chromatin in human epidermis and on the value of skin biopsy in determining sex- J. Path. Bact., 68:17.

ENTIN, M. A., & BAXTER, H. (1950): Experimental and clinical study of histophology and pathogenesis of graduate thermal burns in man and their clinical implication . Plast Reconstr. Surg. 6, 352.

EPSTEIN, E. H. Jr. (1974): Alfa-1 (III), Human skin collagen: Release by pepsin digestion and preponderance in fetal life. J. Biol. Chem. 249, 3225.

EPSTEIN, E. H. Jr., SCOTT, R. D., MILLER, E. J. y PIEZ, K. A. (1971): Isolation and characterization of the peptides derived from soluble human and baboon, skin collagen after cyanogen bromide cleavage. J. Biol. Chem. 246, 1718.

EPSTEIN, W. L., and MAIBACH, H. I. (1965): Cell renewal in human epidermis. Arch. Derm. 92:462.

ESRIG, B. C., FRAZEE, L., STEPHENSON, S. F., et al --- (1977): The predisposition to infection following hemorrhagic shock. Surg. Gynecol. Obstet. - 144:915-17.

EULER, U. S. von, and R. ELIASSON. (1967): Prostaglandins. Medicinal. Chemistry Monographs. New York London: Academic, vol. 8.

EYLAR, E. H. (1966): On the Biological role of glycoproteins. J. Theor. Biol. 10, 89.

EYRE, D. R. y GLIMCHER, M. J. (1973): Evidence for intramolecular crosslinks in chicken bone collage: The isolation of peptides containing allysine aldol. Biochim. Biophys. Acta. 295, 301.

FALK, J., TOLLERZ, G. (1977): Chronic tissue response to implantation of Debrisan-An experimental study Clin. Therapy 1, 185-191.

FALK, J., and TOLLERZ, G. (1977): Chronic Tissue Response to Implantation of Debrisan. Clinical. Therapeutics. 1, 260-262.

FEDDERSEN, C. & GORMSEN, J. (1971): Plasmin digestion of stabilized and non-stabilized fibrin illustrated by pHstat titration and thrombelastography.- Scand J Clin Lab Invest 27, 175.

FEINER, H. y KAYE, G. I. (1976): Ultrastructural evidence of myofibroblast in circumscribed fibromatosis. Arch. Path. Lab. Med. 100, 5.

FELDBERG, W. y GUPTA, K. P. (1973): Pyrogen fever and prostanglandins-like activity in cerebrospinal-fluid, J. Physiol. 228, 41.

FELL, H. B. and THOMAS, L. (1960): Comparison of the--- effects of papain and vitamin A on cartilage. II The effects on organ cultures of embryonic ske-- letal tissue. J. Exp. Med. 111:719-744.

FERNANDEZ, C. R. and PANKEY, G. A. (1975): Tissue invasion by unnamed marine vibrios. J. A. M. A. 233: 1173-76.

FERNANDEZ- MADRID, F. (1967): Biosynthesis of collagen. Biochemical and physicochemical characterization of collagen-synthesizing polyribosomes. J. Cell. Biol. 33, 27.

FERNANDEZ-MADRID, F. PRASAD, A. S., and OBERLEAS. D. - Effects of zinc deficiency on nucleic acids, collagen, and noncollagenous peotein of the connec tive tissue. J. Lab. Clin. Med. 82:951-961.

FERRANS, V. J., y ROBERTS, W. C. (1973): Structural features of cardiac myxomas. Histology, histochemis try and electron microscopy. Hum. Path. 4,11.

FESSLER, J. H., MORRIS, N. P., GREENBERG, G. M. y FESS- LER, L. I. (1975): Assembly and processing of -- procollagen. En: Extracellular Matrix Influences on Gene Expresson, (Skavkin, H. C.) Edit Academic Press, New, York, pag. 101, 109.

FESSLER, L. I., BURGESON, R. E., MORRIS, N. P. y FESS-- LER, J. H. (1973): Collagen synthesis: A disulfi

de-linked collagen precursor in chick bone. Proc Natl. Acad. Sci. USA. 70, 2993.

FESSLER, L. I., MORRIS, N. P. y FESSLER, J. H. (1975a): Procollagen processing to collagen via a disulfide-linked triple-stranded intermediate in chick-calvaria. Fed. Proc. 34, 562.

FESSLER, L. I., MORRIS, N. P. y FESSLER, J. H. (1975b): Procollagen: Biological scission of amino and -- carboxyl extension peptides. Proc. Natl. Acad. - Sci. USA. 72, 4905.

FESSLER, L. I., RUDD, C. y FESSLER, J. H. (1974): Renaturation of disulfide linked procollagen. J. Supramol. Struct. 2, 103.

FIELDING, et al. (1965): Prophylactic topical use of antibiotic in surgical wounds. Med. J. Aust. 2:159

FILSTON, H. C., and VENNES, G. J., (1968): Temperature-as a factor in wound healing. Surg. Gynecol. Obstet. 126:572.

FISCHER, B. H. (1969): Topical hyperbaric oxygen treatment of pressure sores and skin ulcers. Lancet-- 2:405.

FISHER, L. B., and MAIBACH, H. I. The effects of occlusive and semi-permeable dressings on the cell kinetics of normal and wounded human epidermis. In Maibach, H. I. and Rovee, D. T. eds. Epidermal--

Wound Healing. Chicago. Year book Medical Publishers, (1972): pp. 113-122.

FINNEY, D. J. (1964): Statistical Method in Biological Assays(2nd ed.). New York Hafner, p. 99-136.

FITZPATRICK, T. B. and SZABO, G. (1959): The melanocytes: cytology and cytochemistry. J. Invest. Derm. 32:197.

FITZPATRICK, T. B. (1952): Human melanogenesis. Arch. Derm. Syph., 65:379.

FITZPATRICK, T. B., MIYOMATO, M., and ISHIKAWA, K. (1967) The evolution of concepts of melanin biology. -- Arch. Derm. 96:305.

FITZPATRICK, T. B. SEIJI, M., and McGUGAN, A. D. (1961) Melanin pigmentation. New Eng. J. Med., 265:328

FLAXMAN, B. A., SOSIO, A. C., and Van Scott, E. J. ---- (1973): Changes in melanosome distribution in--- Caucasoid skin following topical application of N mustard. J. Invest. Derm., 60:321.

FLODEN, C. H. and WIKSTROM, K. (1978): Controlled clinical trial with dextranomer (Debrisan) on venous leg ulcers. Current Therapeutic Research 24:753

FLORIAN, A. (1970): Die Kompressionstherapie bei Beinleiden. Krankenhausarzt 43, 1-12.

FRAKI, J. E., PELTONEN, L. and HOPSU-HAVU. V. K. (1979) Allergy to various components of topical prepa-

tions in stasis dermatitis nad leg ulcer. Con---tact Dermatitis. in press.

FRANDSEN P. A., OVERGAARD-NIELSEN H. and SOMMER J.(1977) Treatment of second-degree burns of the hand: a comparison of occlusive dressing and gloves. --- Burns 4, 20.

FREIMAN, M., SEIFTER, E., CONNERTON, C., and LEVENSON,-S. M. (1970): Vitamin A deficiency and surgical-stress. Surg. Forum XXI:81.

FREDHOLM, B. B.,B.OBERG and S. ROSELL, (1970): Effects-of vasoactive drungs on circulation in canine -- subcutaneous adipose tissue. Acta physiol. scand 79: 564-574.

FREEARK, R. J. (1977): Blunt torso trauma. Surg. Clin.-North Am. 57: 1317-33.

FRIEDRICH, H. C., und HOlting, H. J.(1977): Defektdec--kung durch synthetischen Hautersatz (Epigard) -- aus dermatologischer Indikation. Krankenhausarzt 50, 298-303.

FRITHZ, A. (1978): Behandling av decubitalsar med dex--tranpolymerparlor. Opuscula Medica 23: 167.

FRITSCH, P. (1971): Langerhanszellen in Viruswarzen. -- Arch. Derm. Forsch., 242:70.

FROST, P., WEINSTEIN, G. D., and Van Scott, E. J. (1966) The ichthyosiform dermatoses. II. Autoradiogra--

phic studies of epidermal proliferation. J. Invest. Derm., 47:561.

FUJIMOTO, D. y TAMIYA, N. (1962):Incorporation of 18O - from air into hydroxyproline by chick embryo. -- Biochem. J. 84, 333.

FUJIMOTO, D. y TAMIYA, N. (1963): Studies on collagen - metabolims with 18 O as a tracer. Biochim. Biophys. Acta. 69, 559.

FULLEN, W. D. HUNT, J. and ALTEMEIER, W. A. (1972): Prophylactic antibiotics in penetrating wounds of-- the abdomen. J. Trauma. 12:282.

FURUYA, T. and IKEDA, S. (1971): Studies on DOPA reaction (stain). Jap. J. Derm., series B, 81:259.

GABBIANI, G., CHAPONNIER, C. y HUTTNER, I. (1978): Cytoplasmic filaments and gap junctions in epithelial -- cells and myofibroblasts during wound healing J. Cell. Biol. 76, 561.

GABBIANI, G., HIRSCHEL, B. J., RYAN, C. B., STATKOV, P. R. y MAJNO, G. (1972): Granulation tissue as a contractile organ. A study of structure and function. J. Exp. Med. 135, 719.

GABBIANI, G., LE LOUS, M., BAILEY, A. J., BAZIN, S. y - DELAUNAY, A. (1976): Collagen and myofibroblasts of granulation tissue. A chemical, ultrastructural and inmunologic study. Virchows. Arch. Abt.B.

Cell Path. 21, 133.

GABBIANI, G. B., y MAJNO, G. (1972): Dupuytren's contracture- Fibroblast contraction? An ultrastructural study. Am. J. Pathol. 66, 131.

GABBIANI, G., RYAN, C, B., LAMELIN, J. P., VASSALI, P., MAJNO, G., POUVIER, C. A., CRUCHAUD, A. y LUSCHEK, E. (1973): Human smooth muscle autoantibody. Its identification as antiactin antibody and a study of its binding to "nonmuscular" cells. - Amer. J. Path. 72, 473.

GABBIANI, G., RYAN, G. B., y MAJNO, G. (1971): Presence of modified fibroblasts in granulation tissue -- and their possible role in wound contraction. Experientia (Basel), 27, 549.

GABBIANI, G., and RYAN, G. B. (1974): Development of a contractile apparatus in epithelial cells during epidermal and liver regeneration. J. Submicr. Cytol. 6:143,

GALLOP, P. M., BLUMENFELD, O. O. y SEIFTER, S. (1972):- Structure and metabolims of connective tissue--- proteins. Ann Rev. Biochem. 41, 617.

GALLOP, P. M. y PAZ, M. A. (1975): Posttranslational -- proteins modifications, with special attention-- to collagen and elastin. Physiol. Rec. 55, 418.

GANROT, K., JACOBSSON, S. & ROTHMAN. U. (1976): A metho

für determining plasma proteins in inflammatory-exudate absorbed by Sephadex. Scand. J. Plast. - Reconstr. Surg. 10, 73.

GANROT, P. O. (1966): Determination of alfa$_2$-macro-globulinas trypsinprotein esterase. Clin Chim. Acta 14, 493.

GANROT, P. O. & NILEHN, J. E. (1968): Immunochemical determination of human plasminogen. Clin Chim Acta 22,335.

GARFIELD, R. E., CHCKO, S. y BLOSE, S. (1975): Phagocytosis by smooth muscle cells. Lab. Invest. 33,--418.

GAY, S., FIETZEK, P. P,, REMBERGER, G., EDER, M. y KUHN K, (1975): Liver cirrhosis: immunofluorescence - and biochemical studies demonstrated two typesof collagen. Klin. Wschr. 53, 205.

GAY PRIETO, J. Dermatologia. Editorial cientifico-Medica Barcelona (España).1976.

GHADIALLY, F. N. y MEHTA, P. N. (1971): Multifunctional mesenchymal cells resembling smooth muscle cells in ganglia of the wrist. Ann, rheum Dis. 30, 31.

GILMORE, N., J. R. VANE and J. H. WYLLIE.(1968): Pros--tanglandins released by the spleen. Nature. ---(Lond) 218. 1135-1140.

GILLIET, F. (1976): Die Therapie von Ulcus cruris. Der-

informierte Arzt, 4,6.

GOKEL, J. M. y HUBNER, G. (1977a): Occurrence of myofibroblast in the differrent phases of Morbus Dupuytren (Dupuytren 's Contracture) Beitr. Path. -- 161, 166.

GOKEL, J. M., y HUBNER, G. (1977): Intrancellular "Fibrous long spacing collagen" in Morbus Dupuytrem (Dupuytre 's Contracture). Beitr. Path. 161, 176

GOLDBERG, B. y GREEN, H. (1964): An analysis of collagen secretion by established mouse fibroblasts lines J. Cell. Biol. 22, 227.

GOLDBERG, B., TAUBMAN, M. B. Y RADIN, A. (1975): Procollagen peptidase: Its mode of action on the native substrate. Cell. 4, 45.

GOLDELATT, M. W. Chem. Ind. (London), 52 (1933) 1056.

GOLDIN, E. G. and JOSEPH, N. R., (1965): The role of -- connective tissue ground substance in wound healing. Surg. Forum. P. 87-89.

GOLDMAN, R. D., LAZARIDES, E., POLLACK, R. y WEBER, R.- (1975): The distribution of actin in non muscle cells. The use of actin antibody in the localization of actin within the microfilament bundles - of mouse 3T 3 cells. Exp. Cell Res. 90, 2.

GOLDMAN, R. D. (1975): The use of heavy meromyosin binding as an ultrastructural cytochemical method -

for localizing and determining the possible functions of actin-like microfilaments in nonmuscle-cells. J. Histochem, Cytochem. 23, 529.

GOLDMAN, L., and GOLDMAN, J. (1963): Some studies of sex chromatin in dermatology. Dermatologica, 127:445

GOOD, B. S. y MANNER, G. (1967): The action of hydrocortisone on collagen formation with special refe-- rence to its action on ribosomal aggregation. -- Biochim. Biophys. Acta, 138, 189.

GOODMAN, T. F. (1972): Fine structure of the cells of-the Suquet-Hoyer canal. J. Invest. Derm., 59:363

GOODWIN, L. G., C. R. JONES, W. G. RICHARDS and J. KOHN (1963): Pharmacologically active substances in - the urine of burned patients. Brit. J. exp. Path 44, 551-560.

GORGAS, K. y BOCK, P. (1974): Myofibroblats in the rat-testicular capsule. Cell Tiss. Res. 154, 533.

GRAHAM, J. H. y MARQUES, A. S. (1967): Colloid milium:- A histochemical study. J. Invest. Dermatol. 49, 497.

GRANSTROM, E., INGER, U., and SAMUELSSON, B. (1965): J. Biol. Chem., 240-457.

GRANT, M. E. y PROCKOP, D. J. (1972): The Biosynthesis-of collagen (Thee Parts) New Engl. J. Med. 286/4 194, 242, 291.

GRANT, M. E., SCHOFIELD, J. D., KEFALIDES, N. A. y PROCKOP, D. J. (1973): The biosynthesis of basement membrane collagen in embryonic chick lens. III.- Intracellular formation of the triple helix and the formation of aggregates through disulfide -- bonds. J. Biol. Che. 248, 2432.

GRANT, M. E., STEVEN, F. S., JACKSON, D. S. y SANDBERG, L. B. (1971): Carbohydrate content of insoluble-elastins prepared from adult bovine and calf ligamentum nuchae and tropoelastin isolated from-- copper-deficient porcine aorta. Biochem. J, 121. 197.

GRANT, N. H. y ALBURN, H. E. (1960): Collagen solubilization by mammaliam proteinases. Archs. Biochem. Biophys. 89, 262.

GRANT, R. A., COX, B. W. y HORNE, R. W. (1967): The -- structure and assembly of collagen fibrils. J. R Microsc.Soc. 87,. 143.

GRANSTROM, E. U. INGER and B. SAMUELSSON, (1965): The - Structure of a urinary metabolites of prostaglandins F_{lalfa} in the rat. J. biol. Chem. 240. 457-461.

GREAVES, M. W., J. SONDERGAARD and W. McDONALD-GIBSON, (1971): Recovery of prostaglandins in human cutaneous inflammation. Brit. med.J.2. 258-261.

GREEN, K., (1969): Gas chromatography-mass spectrometry of O-methyloxime derivates of prostaglandins. -- Chem. phys. Lip. 3. 254-272.

GREEN, K., F. BEGUIN, M. BYGDEMAN, M. TOPPOZADA and N.. WIQUIST, (1972): Analysis of prostaglandin F_{1A} and metabolites following intravenous, intraam-- niotic and vaginal administration of F_{2A}. WHO report nr 2 on prostaglandins. Stockholm. 189-200

GREEN, K. & SAMUELSSON, B. (1964): Thin layer chromatography of prostaglandins. J. Lip. Res. 5, 117.

GREEN, K. and B. SAMUELSSON, (1964): Thin-layer chromatography of prostaglandins. J. Lipid Res. 5.117-120.

GRILLO, H. C., and GROSS, J. (1964): Collagenolytic activity and epithelial-mesenchymal interaction in healing mammalian wounds. J. Cell. Biol. 23:39A,

GRILLO, H. C., and GROSS, J. (1967): Collagenolytic activity during mammalian wound repair. Dev. Biol. 15:300.

GROENEWALD, J. H. (1979): The use of dextranomer (Debrisan) as a cleansing agent in the treatment of -- the post-phlebitic stasis ulcer. Unpublished study, on file Pharmacia .

GROSS, J. y NAGAI, Y. (1965): Specific degradation of - the collagen molecule of tadpole collagenolitic-

enzyme. Proc. natl. Acad. Sci. USA. 54, 1197.

GULDNER, F. H., WOLFF, J. R. y KEYSERLING, D. G. (1972) Fibroblasts as a part of the contractile system- in duodenal villi of rat. Z. Zellforsch. 135,349

GUTTMANN, L., (1973): Spinal Cord Injuries, Comprehensive Management and Research. Blackwell Scientific Publ., Oxford/London/Edinburgh/Melbourne.

GUTTMAN, L., (1965): A New Turning-Tilting.Bed. Int. J. Paraplegia. 3:193.

GUZMAN, N. A. y CUTRONEO, K. R. (1973): Association of- prolyl hydroxylase activity with membranes. Biochem. Biophys. Res. Commun. 52, 1263.

HAEGER, K., (1976): Behandling av bensar. Medicinsk arbog p. 136. Munksgnard, Copenhagen.

HAID-FISCHER, F., und HAID, H. (1965): Venen-Fibel. -- Georg Thieme Verlag, Stuttgart .

HALME, J., UITTO, J., KIVIRIKKO, K. L. y SAXEN, L. (1972) Effects of triidothyronine on the metabolims of- collagen in cultured embryonic bones. Endocrinology, 90, 1476.

HALPRIN, K. M. (1972): Epidermal "turnover time"- a re- examination. Brit. J. Derm., 86:14,

HALLMANS, G. (1976): Wound healing with adhesive zinc - tape. An animal experimental study. Scand. J. -- Plast. Reconstr. Surg. 10:177-184.

HAMBERG, M. AND SAMUELSSON, B. (1965): Biochim. Biophys Acta, 106-215.

HAMBERG, M. and C.-E. JONSSON, (1937): Increased synthesis of prostaglandins in the guinea pig following scalding injury. Acta physiol, scand. 87.--210-215.

HAMBURGER, M. and BIEHL, J. P. (1954): Polymyxin B therapy of meningitis following procedures on central neryous system. Arch. Intern. Med. 93:367,

HANNIG, K. y NORDWIG, A. (1967): Amino acid sequences - in collagen. En "Treatise on Collagen" Vol. 1.- (Ed. Ramachandran, G. N. (p. 73. Academic. Press London and New York.

HARPER, E., CHESNEY, C. M. y COLMAN, R. W. (1975): Co--llàgenolytic in human platelest. En: Extracellular Matrix Influences on Gene Expresion. (Slaukin, H. C.). Edit. Academic Press. New York. pág 137-143.

HARRIS, E. D., CONNERMAN, W. A. y O 'DELL, B. L. (1973) Purification and properties of chick aorta lysyl oxidase. Fed. Proc. 32, 594.

HARRIS, E. D. Jr. y FARRELL, M. E. (1972): Resistance - to collagenase: A characteristic of collagen fibrils cross-linked by formaldehyde. Biochim. Biophys. Acta. 278, 133.

HARRIS, E. D. Jr. y KRANE, S. M. (1974): Collagenases.- N. Eng. J. Med. 291, 557, 605, 651.

HARRIS, E. D. Jr. y McCROSKERY, P. A. (1974): The influence of temperature and fibril stability on degradationof cartilage collagen by rheumatoid synovial collagenase. N. Engl. J. Med. 290, 1.

HARWOOD, R., GRANT, M. E. y JACKSON, D. S. (1973): The subcellular location of interchain disulphide bond formation during procollagen biosynthesis by embryonic tendon cells. Biochem. Biophys. Res Commum, 55, 1188, 1196.

HARWOOD, R., BHALLA, A. K., GRANT, M. E. y JACKSON, D.S (1975): The synthesis and secretion of cartilage procollagen. Biochem. J. 14[illegible], 129.

HARWOOD, R., GRANT, M. E. y JACKSON, D. S. (1974a): Collagen biosynthesis: Characterization of subcellular fractions from embryonic chick fibroblast and the intracellular localization of protocollagen prolyl and protocollagen lysyl hydroxylase. Biochem. J. 144, 123.

HARWOOD, R., GRANT, M. E y JACKSON, D. S. (1974b): Secretion of procollagen: evidence for the transfer of nascent polypeptides across microsomal membranes of tendon cells, Biochem. Biophys. Commun. - 59, 947.

HARWOOD, R., GRANT, M. E., y JACKSON, D. S. (1975a): -- The association of collagen galactosyl and glucosyl transferase with subcelular fractions of embryonic chick tendon cells. Biochems. Soc. Trans 3, 136.

HARWOOD, R., GRANT, M.E. y JACKSON, D. S. (1975b): Studies on the glycosylation of hydroxylysine residues during collagen biosynthesis and the subcellular localization of collagen galactosyltransferase in tendon and cartilage cells. Biochem.-- J. 152, 291.

HARRIS, K. E., (1929): Observation upon a histamine-like substance in skin extracts. Heart 14. 337-367

HAWKINS, D. F. and LAPRUM, A. H. (1961): J. Reprod. Fertility, 2, 1.

HASHIMOTO, K., and TARNOWSKI, W. M., (1968): Some new - aspects of the Langerhans cell. Arch.Derm. 97: - 450.

HASHIMOTO, K., (1969): Cellular envelopes of keratini-- zed cells of the human epidermis. Arch. klin.exp Derm., 235: 374.

HASHIMOTO, K., (1971): Cementsone, a new interpretation of the membrane-coating granule. Arch. Derm. -- Forsch, 240: 349.

HASHIMOTO, K., DIBELLA, R. J., and SHKLAR, G. (1966):--

Electron microscopic studies of the normal human bucal mucosa. J. Invest. Derm., 47:512.

HASHIMOTO, K., and DIFELLA, R. J. (1967): Electron microscopic studies of normal and abnormal elastic fibers of the skin. J. Invest. Derm. 48:405.

HASHIMOTO, K., and LEVER, W. F. (1970): An ultrastructural study of cell junctions in pemphigus vulgaris. Arch. Derm., 101:287.(I).

HASHIMOTO, K. and LEVER, W. F. (1970): The cell surface coat of normal keratinocytes and of acantholy keratinocytes in pemphigus. Brit. J. Derm. 83: 282. (II).

HASHIMOTO, K., (1972): Fine structure of Merkel cell in human oral mucosa. J. Invest. Derm. 58:381.

HASHIMOTO, K. (1973): Fine structure of the Meissner corpuscle of human palmar skin. J. Invest. Derm. 60:20.

HASHIMOTO, K., GROSS, B. G., and LEVER, W. F.(1966):-- Electron microscopic study of aprocrine secretion. J. Invest. Derm. 46:378.

HASHIMOTO, K., GROSS, B. G., and LEVER, W. F. (1966):-- Electron microscopic study of the human adult ecrine gland. I. The duct. J. Invest. Derm., 46 172.

HASHIMOTO, K., (1971): Langerhans cell granule. An en-

docytic organelle. Arch. Derm., 104:148.

HAUSMANN, E. (1967): Cofactor requirements for the enzymatic hydroxylation of lysine in a polypeptide precursor of collagen. Biochim. Biophys. Acta,-- 133, 591.

HAYES, R. L., and RODNAN, G. P. (1971): The ultrasctructure of skin in progresive sclerosis (scleroderma). Am. J. Path., 63:433.

HEDNER, U. & NILSSON, I.-M. (1973): Antithrombin III in a clinical material. Thrombosis Res 3, 631.

HIBBS, R. G., (1962): Electron microscopy of human apocrine sweat glands. J. Invest. Derm., 38:17.

HINMAM, C. D. and MAIBACH, H. I. (1963): Effects of air exposure and occlusion on experimental human skin wounds. Nature 200:377.

HINMAN, J. W., (1972): Prostaglandins. Ann. Rev. Biochem In press.

HINSHAW, J. R. (1963): Progresive changes in the depth of burns. Arch Surg 87, 993.

HIRSCHEL, B. J., GABBIANI, G., RYAN, G. B. y MAJNO, G.-(1971): Fibroblasts of granulation tissue: Immunofluorescent staining with with antismooth muscle serum. Proc. Soc. Exp. Biol. (N.Y.) 138,466

HIRSCHEL, B. J., GABBIANI, G., RYAN, G. B., and MAJNO,G Fibroblasts of granulation tissue: immunofluores

staining with antismooth muscle serum. Proc. Soc Exp. Biol. Med. 138:466.

HITCHCOK, S. E. (1977): Regulation of motility in non-- muscle cells. J. Cell Biol. 74, 1.

HOHN, D. C., and HUNT, T. K. (1975): Oxidative metabolims and microbicidad activity of rabbit phagocytes: cells from wounds and from peripheral blood Surg. Forum. 26:85.

HOOK, R. M. HOOK, C. W. y BROWNS, S. I. (1973): Fibro-- blasts collagenase partial purification and characterization. Invest. Ophthalmol. 12, 771.

HORNING, W. J. VAN DEN HEUVEL, A. and CREECH, B. G. in-GLICK, D. (1963): (Ed), Methods Biochem. Anal. - Interscience. New York.

HORTON, F. W. (1972): Prostaglandins, Springer-Velarg, Berlin, Heidelberg, New York,

HOWARD, J. M., BARKER, W. F. CULBERTSON, W. R. (1964):- Postoperative wound infections: The influence of ultraviolet irradiation of the operating room -- and of various other factors. Ann. Surg. (Suppl) 160: 1.

HOWARD, R. J., and SIMMONS, R. L., (1974): Acquired immunologic deficiencies after trauma and surgical procedures. Surg. Gynecol. Obstet. 139:771-782.

HOWES, E. L., BRIGGS, H., SHEA, R. and HARVEY, S. C. --

(1933): Effect of complete and partial starva---tion on the rate of fibroplasia in the healing--wounds. Arch. Surg. 27:846-858.

HUBER, A. M., and GERSHOFF, S. N. (1975): Effect of --zinc deficiency on the oxidation of retinol and ethanol in rats. J. Nutr. 105:1486-1489.

HUNT, T. K. and ZEDERFELDT, B. (1969): Nutritional and-environmental aspects of wounds healing. In: Dunphy, J. E. and Van Winkle, W., Jr., eds. Repair-and Regeneration. New York, McGrawhill, pp. 217-228.

HUNT, T. K., EHRLICH, H. P., GARCIA, J. A., and DUNPHY, J. E. (1969): Effect of vitamin A on reversing--the inhibitory effects of cortisone on healing - of open wounds in animals and man. Ann. Surg. --170:633-641.

HUNT, T. K. (1976): Fundamentals of Wounds Management - in Surgery. Chirurgecom. p. 46.

HUNT, T. K., LINSEY, M., GRISLIS, G.,(1975): The effect of differing ambient oxygen tension on wound infection. Ann. Surg. 181:35.

HUNTER, J. A. A., MOTTAZ, J. H., and ZELICKSON, A. S.--(1970): Melanogenesis: ultrastructural histochemical observations on ultraviolet irradiated human melanocytes. J. Invest. Derm. 54:213.

HUNTER, J. (1841): The Blood. Inflammation and Gunshot-Wounds, In: The Complete Works of JOHN HUNTER, - F.R.S., Chapter 3.p 438-443. Editors: HASWELL,-- BARRINGTON and HASWELL, PHILADELPHIA.

HURYCH, J. y NORDWIG, A. (1967): Inhibition of collagen hydroxylysine formation by chelating agents. Biochim. Biophys. Acta. 140, 168.

HURLEY, H. J., and SHELLEY, W. B., (1960): The human - Apocrine Sweat Gland in Health and Disease. --- Springfield. Charles C Thomas.

HURLEY, H. J., and WITKOWSKI, J. A., (1962): The dynamic of eccrine sweating in man. J. Invest. Derm. 39: 329.

HUTCHENS, L. H., SAGEBIEL, R. W. and CLARKE, M. A. ----- (1971): Oral epithelial dendritic cells of the - Rhesus monkey, histologic demonstration, fine -- structure and quantitative distribution. J. In-- vest. Derm., 56:325.

HYMAN, A. B., (1969): and BROWNSTEIN, M. H. Tyson 's -- glands. Arch. Derm. 99:31.

ISHIKAWA, H., BISCHOFF, R. y HOLTZER, H. (1969): Formation of afrowhead complexes with heavy meromyosin in a variety of cell types. J. Cell. Biol. 43,312

ISINE, U. (1960): Foreign-body granuloma glove powder - at surgery. Acta Chtr. Scand. 120-95.

JACKSON, D. W., POLLOCK, A. V., and TINDAL, D. S. (1971) The effect of an antibiotic spray in the prevention of wound infection. Br. J. Surg. 58:565.

JACOBSSON, S., JONSSON, L., RANK, F., y ROTHMAN, U., -- (1976): Studies on healing of Debrisan-treated - wounds, Scand, J. Plast. Reconstr. Surg. 10:97.

JACOBSSON, S., JONSSON, L., RANK, F. & ROTHMAN, U. ---- (1976): Studies on healing in Debrisa-treated -- wounds. Scand J. Plast. Reconstr. Surg. 10-2.

JACOBSSON, S., ROTHMAN, U, ARTURSON, G., (1975): A new principie the cleasing of infected wounds. Scand J. Plast Reconstr. Surg. 10:65.

JACOBSSON, S., ROTHMAN, U., GANROT, K., HAEGER, K.,AR-- TURSON, G., JUHLIN, I., (1976): A new principle for cleasing of infected wounds. Scand. J. plast reconstr. Surg. 10, 65-72.

JACOBSSON, S., JONSSON, L., RANK, F., y ROTHMAN, U., -- (1976): Studies on healing in Debrisan-treated - wounds Scand J. Plast. Reconstr. Surg. 10, 97.

JACOBSSON, S., ROTHMAN, U., ARTURSON, G., GANROT, K., - HAEGER, K., & JUHLIN. I. (1976): A new principle for clearing infected wounds. Scand. J. Plast. - Reconstr. Surg. 10, 65.

JACOBSSON, S. & ROTHMAN, U., (1973): Chromatography in wounds: Use of carbohydrate polymer beads as ---

Wound clearing agent. IRCS (73-11) 3-1 1-7.

JACQUES, J., and CAMERON, H. C. S., (1969): Changes in-the ground-substance of healing wounds. J. Path. 99:337.

JANSEN, L., H. (1955): The structure of the connective-tissue, an explanation of the symptoms of the -- Ehlers-Danlos syndrome. Dermatologica. 110:108.

JARRETT, A. (1974): The chemistry and Molecular Biology of Collagen. En: The Physiology and Pathophysiology of the skin, (Vol. 3). The dermis and the-- Dermocytes. (Jarret, A.). Edit. Academic Press. New York. San Francisco, London, pág. 809.

JEFFREY, J. J., COFFEY, R. J., y EISEN, A. Z. (1971): -- Studies on uterine collagenase in tissue culture II. Effect of steroid hormones on enzyme production. Biochim. Biophys. 252, 143.

JIMENEZ, S. y ROSENBLOOM, J. (1974): Decreased thermal-stability of collagens containing analogs of pro line or lysine. Arch. Biochem. Biophys. 163,459.

JIMENEZ, S. A., DE M, P., OLSEN, B. R., y PROCKOP, D. J (1973): Intracellular collagen and protocollagen from embryonic tendon cells. J. Biol. Chem. 248, 720.

JOHNSON, W. C., and HELWIG, E.B., (1963): Histochemistry of the acid mucopolysaccharides of the skin in

normal and in certain pathologic conditions. Am. J. Clin. Path., 40:123.

JOHANSON, W. G., PIERCE, A. K., and SANFORD, J. P., --- (1969): Changing pharyngeal bacterial flora of - hospitalized patients: Emergence of Gram-negative bacilli, N. Engl. J. Med. 281:1137-40.

JONSSON, G. (1978): Testing of potential allergic con-- tact sensibilisation of Debrisan in guinea pigs.- Clinical Therapeutics 1:260.

JONSSON, C. E., and ANGGARD E. (1972): Biosynthesis and metabolims of prostaglandins E_2 in human skin.- Scand. J. Clin. Lab. Invest. 29, 298.

JOHANSSON, S. A., (1960): Hydroxytryptamine in burns. - Acta physiol. scand. 48, 126-131.

JONSSON, C. E., (1971): Smooth muscle stimulating li-- pids in peripheral lymph after experimental burn injury. Scand J. plast. Reconstr. Surg. 5. 1-5.

JONSSON, C. E., and ANGGARD, E. (1972): Biosynthesis -- and metabolims of prostaglandin E_2 in human skin. Scand. J. Clin. Lab. Invest. 29. 289-296.

JONSSON, G., (1978): Testing of potential allergic contact sensitization of Debrisan in Guinea pigs.-- Clin Therapeutics I, nº 4:260,

JOUVENAZ, G. H., NUGIEREN, R. K. BEERTHUIS and D. A. --- VAN DORP, (1970): A sensitive method for the de-

termination of prostaglandins by as chromatography with electron capture detection. Biochim. -- Biophys. Acta. (Amst.) 202. 231-234.

JURKIEWICZ, M. J., and CARRET, L. P. (1964): Studies on the influence of anemia on wound healing. Am. - Surg. 30:23-25.

JUHLIN, L. and MICHAELSSON, G. (1969): Cutaneous vascular reactions to prostaglandins in healthy subjects and in patiens with urticeria and atopic - dermatitis. Acta derm-venereol. (Stock) 49. 251-261.

JUVA, K., PROCKOP, D. J., COOPER, G. W., y LASH, J. W.- (1966): Hydroxylation of proline and the intracellular accumulation of a polypeptide precursor of collagen. Science, 152, 92.

KAGAN, H. M. y FRANZBLAU, C. (1971): Lysyl oxidase of-- chick aorta. Circulation. Suppl. II, 11.

KALEY, G., y WEINER, R. (1971): Prostaglandins E_1 : A - potential mediator of the inflammatory response- Ann. N. N. Y. Acad. Sci. 180, 338.

KANG, A. H., BORNSTEIN, P. y PIEZ, K. A. (1967): The amino acid sequence of peptides from the cross-linking region of rat skin collagen. Biochemistry. 6, 788.

KANG, A. H., FARIS, B. y FRANZBLAU, C. (1969): Intramo-

lecular cross-link of chick skin collagen. Bio-- chem. Biophys. Res. Commum. 36, 345.

KANG, A. H., FARIS, F. y FRANZBLAU, C. (1970): The in - vitro formation of intermolecular cross-link in- chick skin collagen. Biochem. Biophys. Res. Commun, 39, 172.

KANG, A. H., IGARASHI, S. y GROSS, J. (1969): Characterization of the cyanogen bromide peptides from - the alfa-2 chain of chick skin collagen. Biochemistry, 8, 3200.

KANG, A. H., PIEZ, K. A. y GROSS, J. (1969): Characterization of the cyanogen bromide peptides from the alfa-1 chain of chick skin collagen. Biochemis-- try, 8, 1506.

KALEY, G., and WEINER, R. (1971): Effect of prostaglandins E_1 an leucocyte migration. Nature New Biol. 234. 114-115.

KAO, K. Y., NITT, W. E. DAWSON, R. L., and McGAVACK, T H. (1963): Connective tissue. VIII. Factors effecting collagen synthesis by sponge connective tissue. Proc. Soc. Exp. Biol. Med. 113:762.

KAPANCI, Y., ASSIMACOPOULOS, A., IRLE, C., ZWAHLEN, A. y GABBIANI, G., (1974): Contractile intersticial cells in pulmonary alveolar septa: a possible regulator of ventilation/perfusion ratio? J. Cell.

Biol. 60, 375.

KEFALIDES, N. A. (1971a): Isolation of a collagen from- basement membranes containing three identical alfa-chains. Biochem. Biophys. Res. Commun 45, 226

KEFALIDES, N. A. (1973): Structure and biosynthesis of- basement. Int. Rev. Connect Tiss. Res. 6,63.

KEFALIDES, N. A., (1975): Basement membranes: structu-- ral and biosynthesis considerations. J. Invest.. Dermatol. 65, 85.

KHALIFA, A. y COHEN, M. P., (1975): Glomerular protocollagen lysyl-hydroxylase activity in streptozotocin diabetes. Biochim. Biophys. Acta. 386,332.

KIDD, R. L., KRAWCZYK, W. S. and WILGRAM, G. F.,(1971). The Merkel cell in human epidermis: Its differentiation from other dendritic cells. Arch, Derm. 241:374.

KIISTALA, U., and MUSTAKALLIO, K. K. (1968): The presence of Langerhans cells in human dermis with special reference to their potential mesenchymal - origin. Acta dermatoven., 48:115.

KIVIRIKKO, K. I. (1970): Urinary excretion of hydroxy-- proline in health and disease. En: International rewiew of connective tissue research. Vol. 5, -- (D. A. Hall and D. S. Jackson), Edit. Academic - Press, New York. págs. 93-163.

KIVIRIKKO, K. I., y PROCKOP, D. J. (1967): Enzymatic hydroxylation of proline and lysine in protocollagen. Proc. Natl. Acad. Sci. USA, 57, 782.

KIVIRIKKO, K. I., y PROCKOP, D. J., (1972): Partial purification and characterization of protocollagen lysine hydroxylase from chick embryos. Biochim.-Biophys. Acta. 258, 366.

KIVIRIKKO, K. I., y RISTELI, L. (1976): Biosynthesis of collagen and its alterations in pathological states. Medical Biology, 54, 159.

KIVIRIKKO, K. I., RYHANEN, L., ANTTINEN, H., BORNSTEIN, P., y PROCKOP, D. J., (1973): Further hydroxylation of lysyl residues in collagen by protocollagen lysyl hydroxylase in vitro. Biochemistry, - 12, 4966.

KIVIRIKKO, K, I., SHUDO, K., SAKAKIBARA, S. y PROCKOP, D. J. (1972): Studies on protocollagen lysine -- hydroxylase: Hydroxylation of synthetic peptides and the stoichiometric decarboxylation of alfa-ketoglutarate. Biochemistry, 11, 122.

KLEINMAN, H. K., MURRAY, J. C., McGOODWIN, E. B. y MARTIN, G. K., (1978): Connective tissue structure-cell binding to collagen. J. Invest. Dermatol.-- 71/1, 9.

KLEVAY, L. M., RECK, S. J., and BARCOME, D. F. (1979):-

Evidence of dictary copper and zinc deficiencies J. A. M. A, 241: 1916-1918.

KLINGMULLER, G. (1958): Die Darstellung alkalischer Phosphatase in Capillaren. Tutarzt, 9:84.

KOBAYASI, T., (1968): Electron microscopy of the elastic fibers and the dermal membrane in normal human skin. Acta dermatoven., 48:303.

KOHN, L. D., ISERSKY, C., ZUPNIK, J., LENAERS, A., LEE, G. y LAPIERE, C. M. (1974): Calf tendon procollagen peptidase: Its purification and en dopeptidase mode of action. Proc. Natl. Acad. Sci, USA.--71, 40.

KOMURA, J,, and OFUJI, S. (1972): Ultrastructure of halfdesmosomes fixed only in glutaraldehyde. Dermatologica. 144:35.

KONRAD, K., and HONIGMANN, H., (1973): Elektronenkopischer Nachweis einer mitotischen Langerhans-Zelle in normaler menschlicher Epidermis. Arch. Derm. Forsch, 246:70.

KONGLER, H.(1978): The management of post-surgical infected wounds a one-year trial on lower-leg amputation stumps. The Management of Infected Wounds. Procedings of a European Symposium held-in The Hague. 9th September. p 47 (Excerpta Medica.).

KOOB, T. J. y JEFFREY, J. J. (1974): Hormonal regula--- tion of collagen degradation in the uterus: Inhi bition of collagenase expresion by progesterone- and cyclic AMP. Biochim. Biophys. Acta. 354, 61.

KOOB, T. J., JEFFREY, J. J. y EISEN, A. Z. (1974): Regu lation of human skin collagenase activity by hy- drocortisone and dexametasone in organ culture.- Biochem. Biophys. Res. Commum. 61, 1083.

KOPF, A. W., (1957): The distribution of alkaline phos- phatase in normal and pathologic human skin. Arch Derm. 75:1

KOROS, A. M. C., AXELROD, A. E., HAMILL, E. C., and -- SOUTH, D. J. (1976): Immunoregulatory consequen- ces of vitamin deficiencies on background plaque forming cells in rats (39388). Proc. Soc. Exp. Biol. Med. 152:322-326.

KOSIAK, M., KUBICEK, W., OLSON, M., DANZ, J., KOTTKE, F (1958): Evaluation of Presure as a Factor in the Production of Ischial Ulcers. Arch. of Physical Medicine and Rehabilitation, 623-629.

KRAWCZYK, W. S. (1971): A pattern of epidermal cell mi- gration during wound healing. J. Cell. Biol. 49: 247.

KRIZEK, T. J. and ROBSON, M. C., (1975): Biology of Sur gical Infection . Surgical. Clincs. of North ---

America. 55:1261.

KRIZEK, T. J., and ROBSON, M. C., (1975): Evolution of-quantitative bacteriology in wound management. - Am. J. Surg. 130: 579.

KRIZEK, T. J., ROBSON, M. C., and KHO, E. (1967):Bacterial growth and skin graff survival. Surg. Forum 18:518,

KRUSE, N. J., y BORNSTEIN, P., (1975): The metabolic requirements for transcellular movement and secretion of collagen. J. Biol. Chem. 250, 4841.

KUBOKI, Y. y MECHANIC, G. L. (1974): The distribution - of delta - dihydroxylysinonorleucine in bovine - tendon and dentin. Int. Rev. Connect. Tissue. -- Res. 2, 223.

KUHN, C., III and ROSAI, J. (1969): Tumors arising from pericytes. Arch. Path., 88:653.

KUHN, K. y FIETZEK, P. P. (1975): The structure of co-- llagen. En: Collagen metabolims in the liver --- (H. Popper and K. Becker)/ Edit. Stratton, New - York. págs. 15-28.

KULONEN, E. y POTILA, M. (1975): Effects of antirheumatic drugs on sponge-induced granulation tissue,- rheumatoid synovial tissue, matrixfree tendon -- cells and fibroblast plasma membranes in vitro. Biochem. Pharmacol. 24, 1671.

KUROSUMI, K., YAMAGISHI, M, and SEKINE, M., (1967): Mitochondrial deformation and apocrine secretory - mechanism in the rabbit submandibular organ as - revealed by electron microscopy. Z. Zellforsch., 55:297.

KUUITTI, E. R., TUDERMAN, L. y KIVIRIKKO, K. I., (1975) Human prolylhydroxylase. Purification partial -- characterization and preparation of antiserum to the enzyme. Eur. J. Biochem. 57, 181.

LAGACE, R., DELAGE, C. y ROBERT, J. (1974): Le mésenchyme primitif du foie. Etude ultrastructurale. - Anan.Anat. path. 19, 275.

LADINSKY, H. and STRANDBERG, K. (1969): Formation of -- spasmogenic lipids in cat lung induced by bee -- venom. In "Prostaglandins Peptides and Amines" - Ed. P. Matagazza and E. W. HORTON. Academic Press London p. 39-49.

LAITY, J. L. H., (1969): The release of prostaglandins-E_1 from the rat phrenic nerve-diaphragm preparation. Brit. J. Pharmacol. 37. 698-704.

LAITY, J. L. H., and MOORE, D. (1970): The effect of -- histamine releasers on the output of prostaglandins from rat diaphragms. J. Pharm. Pharmacol. - 22. 384-385.

LAMBERG, S. y Dorfman, A. (1973): Synthesis and degrada

tion of hyaluronic acid in the cultured fibro--- blasts of Marfan 's disease. J. Clin. Invest. 53 2428.

LAMPERT, I. A., TRENCHEV, P. y HOLBOROW, E. J. (1974):- Contractile protein changes in the regenerating- rat liver. Virchows Arch. Abt. B. Zell-pathol. 15 351.

LAPIERE, C. M., LENAERS, A. y KOHN, L. D. (1971): Procollagenpeptidase: an enzyme excising the coordination peptide of procollagen. Proc. Natl. Acad. - Sci. USA. 68, 3054.

LAPIERE, C. M. y PIERARD, G. (1974): Skin procollagen - peptidase in normal and pathologic conditions. J. Invest. Dermatol. 62/6, 582.

LAPIERE, C. M., (1972): Biology and Pathology at the molecular level of connectiv tissue fibrous pro--- teins. Arch. belg. derm. syph., 28:15.

LAPIERE, C. M. (1973): The molecular basis of connective tissue pathology. Brit. J. Derm., 89:87.

LASSUS, A., KARVONEN, J., and JUVAKOSKI, T. (1977): Dextran polymer particles (Debrisan) in the treat-- ment of penile ulcers. Acta Dermatovener (Stockholm) 57: 361.

LAURELL, C. B., (1972): Electroimmuno assay. Scand. J. Clin. Lab. Invest. 29. Suppl. 124, 21.

LAZARIDES, E. (1976): Actin, alpha actinin and tropomosin interaction in the structural organization of actin filaments in nonmuscle cells. J. Cell Biol. 68, 202.

LAZARIDES, E. (1975): Tropomyosin antibody: the specific localization of tropomyosin in nonmuscle cells. J Cell. Biol. 65, 549.

LAZARIDES, E. y WEBER, K. (1974): Actin antibody: The specific visualization of actin filaments in non muscle cells. Proc. Natl. Acad. Sci. USA. 71,2268

LAZARUS, G. S., BROWN, R. S., DANIELS, y FULLMER, H. M. (1968): Human granulocyte collagenase. Science, 159, 1483.

LAZARUS, G. S., (1972): Collagen, collagenase and clinicians. Brit. J. Drem., 86:193.

LAZARUS, G. S., DANIELS, J. R., BROWN, R. S., BLADEN, H A. y FULLMER, H. M. (1968): Degradation of collagen by a human granulocyte collagenolytic system J. Clin. Invest. 47, 2622.

LAYMAN, D. L., NARAYANAN, A. S., y MARTIN, G. R., (1972) The production of lysyl oxidase by human fibro-- blasts in culture. Arch. Biochem. Biophys. 149, 97.

LAYMAN, D. L., y ROSS, R. (1973): The production and -- secretion of procollagen peptidase by human fi--

broblasts in culture. Arch. Biochem. Biophys. -- 157, 451.

LAYMAN, D. L., SOKOLOFF, L. y MILLER, E. J. (1972): Collagen synthesis by articular chondrocytes in -- monolayer culture. Exp. Cell. Res. 73, 107.

LE CHARPENTIER, Y., LOUVEL, A., DE SAINT-MAUR, P. P., - DAUDET-MONSAC, M., LEGER, L. y ABELANET, R.(1974) Etude ultrastructurale d'un insulome a stroma -- amyloïde. Discussion de l'histogénése des amyloses localisées. Virchows Arch. Abt. path. Anat.- 362, 169.

LEAK, L. V. y BURKE, J. F. (1968): Ultrastructural studies on the lymphatic anchoring filaments. J. - Cell. Biol. 36, 129.

LEE, L. K., AMBRUS, J. L. (1975): Collagenase therapy - for decubitus ulcers. Corials.30:91.

LEIBOVICH, S. J., and ROSS, R. (1975): The role of the- macrophage in wound repair: a study with hydro-- cortisone and antimacrophage serum. Am. J. Pathol 78:71.

LENAERS, A., ANSAY, M., NUSGENS, B. V. y LAPIERE, C. M. (1971): Collagen made of extended alfa-chains, - procollagen, in genetically defective dermatos-- parxic calves. Eur. J. Biochem. 25, 533.

LERNER, A. B., and FITZPATRICK, T. B. (1950): Biochemis

try of melanin formation. Physiol. Rev., 30:91.

LEINIKKI, P. & SALO, O. P. (1973): Genital herpes. Virological diagnosis and antibody response. Acta Dermatovener (Stockholm) 53:65.

LERNER, A. B., (1971): On the etiology of vitiligo and gray hair. Am. J. Med., 51:141.

LEVENSON, S. M., and SEIFTER, E. (1977): Dysnutrition, wound healing, and resistance to infection. Clin Plast. Surg. 4:385-388.

LEVENSON, S. M., SEIFTER, E., and VAN WINKLE, W. Jr. (1977): Fundamentals of Wound Management in Surgery. Nutrition. South. Plainfield, N. J., Chirurgecom,

LEVITT, D. y DORFMAN, A. (1973): Control of chondrogenesis in limb-bud cell cultures by bromodeoxyuridine. Proc. Natl. Acad. Sci. USA. 70, 2201.

LEWIS, A. C., (1979): Louisiana State University School of Medicine, New Orleans, La. Personal communication.

LEWIS, T. and GRANT, R. T. (1924): Vascular reactions of the skin to injury. II. The liberation of histamine-like substance in injured skin; the underlying cause of factitions urticaria and of wheals produced by burning; and the observations upon the nervous control of certain skin reactions.

Heart 11. 209-265.

LIEZ, H. Y DONATH, K. (1970) : Zur ultrastruktur und -- Entstchung des Amyloids im medullären Schilddrüsen Carcinome. Virchows Arch. Abt. A. path. Anat 350, 261.

LIM, L.T., MICHUDA, M. and BERGAN, J. J. (1978): The -- therapy of peripheral vascular ulcers-surgical - management. Angiology 29:654.

LINARES, J., DIAZ-FLORES, L., HERNANDEZ, C., MARTINEZ,- E. y CAMARA, M. (1978): Fibroma óseo no osteogénico. Estudio comparativo e histogenético de sus variantes fibrosa y xantomatosa. Morfol. Norm. y Patol. Sec. B., 2,147.

LOCALIO, S. A., MORGAN, M. E., and HINTON, J. W. (1948) The biological chemistry of wound healing. I. -- The effect of dl-methionine on the healing of -- wounds in protein-depleted animals. Surg. Gynecol Obstet. 86:582-590.

LOCHBÜHLER, H., KAUFMANN, W., STORZ, W. L., (1978): Ein neues Prinzip zur Behandlung infizierter Wunden. Therapiewoche 28, 2664.

LOFSTROM, B., and ZEDERFELDT, B., (1957): Effects of induced hypothermia on wound healing. A study in - the rabbit. Acta Chir. Scand. 112:152.

LOOKINGBILL, D. P., MILLER, S. H. and KNOWLES, R. C. --

(1978): Bacteriology of chronic leg ulcers. Ar-- chives of Dermatology. 114:1765.

LOWBURY, E. J. (1964): Methods for disinfection of hands and operative sites. Br. Med.J. 2:531.

LOWTHER, D. A. (1963): Chemical aspects of collagen fibrillogenesis. In: Hall, D. A., ed. International Review of Connective Tissue Research. Vol. I New York, Academic Press, p. 64.

LUNDBERG, C. and CAMPBELL, D. (1979): Effect of Debrisan treatment on wound oedema in rats. Data on file. Pharmacia.

LUNDGREN, C. E. J., and ZEDERFELDT, B. (1969): Influence of low oxygen pressure on wound healing. Acta Chir. Scand. 135:555.

LUNDGREN, C., MUREN, A., and ZEDERFELDT, B. (1959): Effect of cold vasoconstriction on wound healing - in the rabbit. Acta. Chir. Scand. 118:1.

LUNDH, B., HEDBERG, H. & LAURELL, A, B. (1970): Studies of the third component of complement in synovial fluid from arthritic patients. I. Immunochemical quantitation and relation to total complement. - Clin. Exp. Immunol. 6, 407.

MACK, R. M., and CANTRELL, J. R., (1967): Quantitative-studies of the bacterial flora of open skin wound the effect of topical antibiotic. Ann. Surg. 166

886.

MAGNUSSON, B. and KLIGMAN, A. (1969): The identification of contact allergen by animal assay. The guinea-pig maximization test. J. Invest. Dermatol. 52, 268.

MAJNO, G., GABBIANI, G., HIRSCHEL, B. J., RYAN, G. B., y STATKOV, P. R. (1971): Contraction of granulation tissue in vitro: similarity to smooth muscle. Science. 173, 548.

MAJNO, G., JORIS, I. y RYAN, G. B., (1970): Contraction of nonmuscular cells: endothelium and fibroblast J. Cell Biol. 47, 127.

MARPHY, L. y ROSENBLOOM, J. (1973): Evidence that chick tendon procollagen must be denatured to serve as substrate for proline hydroxylase. Biochem. J. - 135, 249.

MARTIN, G. R., BYERS, P. H., PIEZ, K. A. (1975): Procollagen. Adv. Enzymol. 42, 167.

MARTINEZ, I. R. (1972): Fine structural studies of migrating epithelial cells following incision wound In: Maibach, H. I. and Rovee, D. T. eds. Epidermal Wound Healig. Chicago, Year Book Medical Publishers, pp. 323-342.

MASSON, P. (1948): Pigment Cells in Man. Spec. Publ. N. Y. Acad. Sci. 4:15

MATOLTSY, A. G., and MATOLTSY, M. (1962): A study of -- morphological and chemical properties of kerato-hyalin granules. J. Invest. Derm., 38:237.

MATTHEW, J. S. PEREDA A. I. and AGILERA, A, P., (1962): J. Chromatog., 9:331.

MAYNE, R., VAIL, M. S., y MILLER, E. J. (1975): Analysis of changes in collagen biosynthesis that occur-- when chick chondrocytes are grown in 5-bromo-2'-deoxyridine. Proc. Natl. Acad. Sci. USA. 72, 4511

McCLEMENT, E. J. W., SHAND, I. G. and RAMSAY, B. (1979) Pressure sores: A new method of treatment. British Journal of Clinical Practice 33:21.

McCLEMONT, E., SIMPSON, D. C., McCUBBIN, K. J., DICK, T . D., BUCHAN, A. C., and HARRIS, P., (1978): The Simpson-Edinburgh Low Presure Air Bed. Int. J. -- Paraplegia, 16. 154-159.

McCROSKERY, P. A., WOOD, S. Jr., y HARRIS, E. D. Jr. -- (1973): Gelatin: A poor-substrate for a mammalian collagenase. Science, 182, 70.

McGEE, JO 'D, O'MARE, R. P., y PATRICK, R. S. (1973): - Stimulation of the collagen biosynthetic pathway by factors isolated from experimentally-injured-liver. Nature (New Biol.), 243, 121.

McGIFF, J. C., TERRAGNO, N. A., STRAND, J. C. et al --- (1969): Selective passage of prostaglandins ---

across the lung. Nature (Lond) 223, 744.

McGRIFF, J. C., CROWSHAW, K. TERRAGNO, N. A., LONIGRO, A. J., STRAND, J. C. SR WILLIAMSSON, K. K. F. NG and LEE, J. B. (1969): Release of prostaglandins like substance during acute ischemia. Circulation 40. suppl. III.

McGIFF, J. C., CROWSHAW, K. . TERRAGNO, N. A. and LONIGRO A. J., (1970): Renal prostaglandins: possible regulators of the actions of pressor hormones. Nature (Lond): 227. 1255-1257.

MECHANIC, G. L. (1974): Collagen crosslinks: Direct evidence of a reducible stable form of the schiff - base 6dehydro-5-hydroxylisinonorleucine in bone-collagen. Biochem. Biophys. Res. Commun. 56, 293

MECHANIC, G. L., GALLOP, P. M., y TANZER, M. L., (1971) The nature of crosslinking in collagens from mineralized tissues. Biochem. Biophys. Res, Commun 45, 644.

MECHANIC, G. L., KUBOKI, Y., SHIMOKAWA, H., NAKAMOTO, K SASAKI, S. y KAWANISHI, Y. (1974): Collagen crosslinks: Direct quantitative determination of stable structural crosslinks in bone and dentin collagens. Biochem. Biophys. Res. Commun. 60, 756,

MEDAWAR, P. B. (1947): The behaviour of mammalian skin-epithelium under strictly anaerobic conditions.-

C. J. Microsc. Sci. 88:27.

MEER, R., Center for Decubitus Research, Jensen Beach,- Florida Personal Communication.

MESCON, H., HURLEY, H. J., and MORETTI, G. (1956): The- anatomy and histochemistry of the arteriovenous- anastomosis in human digital skin. J. Invest. -- Derm., 27:133,

MESSINA, E. J., WEINER, R. y KALEY, G. (1974): Microcir culatory effects of prostaglandins E_1, E_2 , and- A_1 in the rat mesentery and cremaster muscle. -- Microvasc. Res. 8, 77.

MEYER, E., and MEYER, M. B. (1944): The pathology of -- staphylococcus abscensses in vitamin C-deficient guinea pigs. Bull. Johns Hopkins Hosp. 74:98-116

MILLARD, L. G., ROBERTS, M. M., and GATECLIFFE, M. (197? Chroniclegulcerstreated by the pinch graff method Brit. J. Derm. 97, 289-295.

MILLER, E. J. (1972): Structural studies on cartilage - collagen employing limited cleavage and solubi- lization with pepsin. Biochemistry. 11, 4903.

MILLER, E. J., LANE, J. M., y PIEZ, K. A. (1969): Isola tion of the peptides derived from the alfa-1 -- chain of chick bone collagen after cyanogen bro- mide cleavage. Biochemistry, 8, 30.

MILLER, E. J., y LUNDE, L. G., (1973): Isolation and --

characterization of the cyanogen bromide peptides from the alfa-1 (II) chain of bovine and human cartilage collagen. Biochemistry, 12, 3153.

MILLER, E. L., (1971): Chromatographic separation of the enzymes required for hydroxylation of lysine and proline residues of protocollagen. Arch. Biochem. Biophys. 147, 339.

MILLER, E. L. (1972): Rapid assay for lysyl protocollagen hydroxylase activity. Anal. Biochem. 45,202

MILLER, J., HARDY, S. B. and SPIRA, M. (1965): Treatment of burns of the hand with silicone dressing and early motion. J. Bone. Joint.Surg. 47A, 938.

MILLER, W. J., MORTON, J. D., PITTS, W. J., and CLIFTON C. M. (1965): Effect of zinc deficiency and restricted feeding on wound healing in the bovine.. Proc. Soc. Exp. Biol. Med. 118:427-430.

MISHIMA, Y., and TANAY, A., (1968): The effect of alpha methyldopa and ultraviolet irradiation on melanogenesis. Dermatologica, 136:105.

MITCHELL, R. E., (1970): Melanocytes in Australian Aboriginal skin. J. Invest. Derm., 94:93.

MONCRIEF, J. A., SCHWITZEN, W. E., and ROSE, L. R. ---- (1964): Primary excision and grafting in the -- treatment of third-degree burns of the dorsum of the hand. Plast, Reconstr. Surg. 33, 304.

MOLOKHIA, M. M. and FORTNOY, B. (1973): Serum zinc and-healing of venous leg ulcers. 1:41.

MONIS, B. (1963): Variations of the aminopeptidase activity in granulation tissue and in serum of rats-during wound healing. Am J. Pathol. 42, 301.

MONCADA, S., FERREIRA, S. H. y VANE, J. R. (1973): Prostaglandins, aspirin-like drungs and the oedema - of inflammation. Nature 246,217.

MONSON, J. M., CLICK, E. M., y BORNSTEIN, P. (1975): -- Further characterization of procollagen. Purification and analysis of the alfa-1 chain of chick bone procollagen. Biochemistry. 14, 4088.

MONTAGNA, W., CHASE, H, B., and LOBITZ, W. C., Jr.(1953) Histology and cytochemistry of human skin. IV. - The eccrine sweat glands, J. Invest. Derm. 20: - 415.

MONTAGNA, W., and FORD, D. M. (1969): Histology and cytochemistry of human skin. XXXIII. The eyelid. - Arch. Derm., 100:328.

MONTAGNA, W., EISEN, A. Z., RADEMACHER, A. H., and CHASE, H. B., (1954): Histology and cytochemistry - of the skin. VI. The distribution of sulfhydryl-and disulfide groups. J. Invest. Derm., 23:23.

MONTAGNA, W., (1970): Histology and cytochemistry of human skin. XXXIV. The eyebrows. Arch. Derm. 101:

2:7.

MONTAGNA, W., and YUN, J. S. (1972): The glands of Montgomery. Brit. J. Derm., 86:126.

MONTAGNA, W. (1962): The structure and Function of Skin ed. 2, p. 126. New York, Academic Press.

MONTES, L. F., BAKER, B. L., and CURTIS, A. C. (1960):- The cytology of the large axillary sweat glands in man. J. Invest. Derm., 35:273.

MORALES, A. R., GINE, G., PARDO, V. y HORNE, R. C. --- (1975): The ultrastructure of smooth muscle tu-- mors with a consideration of the possible rela-- tionship of glomangiomas, hemangiopericytomas -- and cardiac myxomas. En: Pathology Annual: S. C. Sommers. Appleton-Century-Crofts, New York, 65.

MORAN, J. M., ATWOOD, R. P., and ROWE, M. J. (1965): A- Clinical and bacteriologic study of infections - associated with venous cutdowns. N. Engl. J. Med 272:554.

MORETI, G. (1968): The blood vessels of the skin. In -- Marchionini, A. (ed): Handbuch der Haut- und -- Geschlechtskrankheiten, Ergänzungswerk. Vol. 1, part 1, p. 491. Berlin, Springer,

MORRIS, N. P., FESSLER, L. I., WEINSTOCK, A. y FESSLER, J. H. (1975): Procollagen assembly and secretion in embryonic chick bone. J. Biol. Chem. 150,5719

MORRISON, J. D. (1978): Debrisan:An effective new wound cleanser. Scottish Medical Journal 23:277.

MOSS, N. S., y BENDITT, E. P., (1970): Spontaneous and-experimentally induced arterial lesions. I. An - ultrastructural survey of the normal chicken aorta. Lab. Invest. 22, 166.

MOTTAZ, J. H., and ZELICKSON, A. S. (1967): Melanin -- transfer; a possible phagocytic process. J. In-- vest. Derm. 49:605.

MUNGER, B. L. (1965): The cytology of apocrine sweat --- glands. II. Human. Z. Zellforsch., 68:837.

MURPHY, W. H., VON DER MARK, K., McENEANY, L. S. G. y - BORNSTEIN, P. (1975): Characterization of procollagen-derived peptides unique to the precursor-molecule. Biochemistry. 14, 3243.

MUSSINI, J. M., SLABODSKY-BROUSE, N., HENIN, D. y TUR-- PELIN, F. (1977): Le myofibroblaste. Acquisitions récentes. Path. Biol. 25, 477.

MUTO, Y., SMITH, J. E., MILCH, P. O. and GOODMAN, D. S. (1972): Regulation of retinol-binding protein metabolims by vitamin A status in the rat. J. Biol Chem. 247: 2[illegible]-2550.

MYLLYLA, P., RISTELI, L. y KIVIRIKKO, K. I. (1975a): -- Assay of collagen-galactosyltransferase and co-- llagen- glucosyltransferase activities and preli

minary characterization of enzymic reactions with transferases from chick-embryo cartilage. Eur. J. Biochem. 52, 401.

MYLLILA, R., RISTELI, L. y KIVIRIKKO, K. I. (1975b): Glucosylation of galactosulhydroxylysyl residues in collagen in vitro by collagen glucosyltransferase Inhibition by triplehelical conformation of the substrate. Eur. J. Bioche. 58, 517.

MYLLILA, R., RISTELI, L. y KIVIRIKKO, K. I. (1976): Collagen glucosultransferase. Partical purification and characterization of the enzyme from whole chick embryos and chick embryo cartilage. Eur. J. Biochem . 61, 59.

NAGAI, Y. (1973): Vertebrate collagenase: Further characterization and the significance of its latent - form in vivo. Mol. Cell. Biochem. 1, 137.

NAKANO, J. (1973): General pharmacology of the prostaglandins; in Cuthbert (Ed) the prostaglandins. Pharmacological and Therapeutic Advances, p. 23-(William Heineman. London).

NAKANO, J., ANGGARD, E., and SAMUELSSON, B. (1969): 15-Hydroxy prostanoate dehydrogenase. Prostaglandins as substrates and inhibitors. Eurp. J. Biochem.- 11. 386-389.

NARAYANAN, A. S., SIEGEL, R. C. y MARTIN, G. E., (1972)

On the inhibition of lysyl oxidase by Beta-amino propionitrile. Biochem. Biophys. Res. Commun. 46 475.

NARAYANAN, A. S., SIEGEL, R. C., y MARTIN, G. R. (1974) Stability and purification of lysyl oxidase. Arch Biochem. Biophys. 162, 231.

NEDWICH, A., SCHOLIC, I. H., FORFMAN, J. & HOWARD, J. - M. (1964): Histochemical observations of second-degree burns. J. Trauma 4. 269.

NELEMANS, T. G., KEUNING, F. J., van RIJSSEL, T. G., and RUITER, M. (1952): Histologic changes in the tonofibrils in vesicular and bullous diseases of - the skin. Brit. J. Derm. 64:177.

NICHOLS, R. L., (1977): Use of antibiotics in stomach,- duodenal, and biliary tract surgery. J. Surg. -- Pract. 20-29, August.

NIEBAUER, G., KRAWCZYK, W. S., and WILGRAM, G. F., -.-. (1970): Uber die Langerhans-Zellorganelle bei -- Morbus Letterer-Siwe. Arch. klin. exp. Derm., -- 239:125.

NIEBAUER, G., KRAWCZYK, W. S., KIDD, R. L., and WILGRAM G. F., (1969): Osmium zinc iodide reactive sites in the epidermal Langerhans cell. J. Cell. Biol. 43:80.

NIEUWMEIJER, A. H., (1953): Tonofibrils in bullous der-

matoses: A histo- and cyto-pathologic study. Dermatologica, 106-379.

NIERMAN, M. M. (1978): Treatment of dermal and decubitus ulcers. Drugs 15:226.

NIGRA, T. P., FRIEDLAND, M., and MARTIN, G. R. (1972):- Controls of connective tissue synthesis: collagen metabolims. J. Invest. Derm., 59:44.

NILEHN, J. E. (1967): Separation and estimation of -- "split products" of fibrinogen and fibrin in human serum. Thromb Diath Haemorrh (Stuttg) 18,487

NILSSON, I. M. & OLOW, B. (1962a): Determination of fibrinogen and fibrinogenolytic activity. Thromb-- Diath Haemorrh (Stuttg) 8, 297.

NILSSON, I. M. & OLOW, B. (1962b): Fibrinolysis induced by streptokinase in man. Acta Chir Scand. 123,-247.

NILSSON, I. M. &PANDOLFI, M. (1970): Fibrinolytic res-- ponse of the vascular wall. Thromb Diath Haemorrh Suppl. 30, 232.

NIST, C., von DER MARK, K., HAY, E. D., OLSEN, B. R., - BORNSTEIN , P., ROSS, R. y DE M, P. (1975): Location of procollagen in chick corneal and tendon-fibroblast with ferritin-conjugated antibodies.- J. Cell. Biol. 65, 75.

NORMAN, A. and SJOVALL, J. (1958): On the transformation

and enterohepatic circulation of cholic acid in the rat. J. Biol. Chem. 233. 872-885.

NORMAN, A., (1953): Separation of conjugated bile acids partition chromatography. Bile acids steroids 6 Acta chem. scand. 7. 1413-1419.

NOWACK, H., GAY, S., WICK, G., BECKER, U. y TIMPL, R. - (1976): Preparation and use in immunohistology - of antibodies specific for type I and type II collagen and procollagen. J. Immunol. Meth.12,117.

ODLAND, G., and ROSS, R. (1968): Human wound repair. I. Epidermal regeneration. J. Cell Biol. 39:135.

ODLAND, G. F., (1958): The fine structure of the interrelationship of cells in the human epidermis. J. Biophys. Biochem. Cytol. 4:529.

O 'HARA, J. M., and BENSCH, K. G., (1967): Fine structure of eccrine sweat gland adenoma, clear cell-type, J. Invest. Derm., 49:261.

OKUN, M. R., (1972): Dermal dopa-positive cells in li-- chen planus. Arch. Derm., 106:422.

OKUN, M. R., EDELSTEIN, L. M., Or, N., HAMADA, G., --- (1970): The role of peroxidase vs. the role of - tyrosinase in enzymatic conversion of tyrosine - to melanin in melanocytes, mast cells and eosinophils. J. Invest. Derm. 55:1.

OLEJNICZAK, S. and ZIELINSKI, A. (1977): Topical oxygen

promotes healing of leg ulcers. Resident and Staf Physician 23:165.

OLSEN, B. R., BERG, R. A., KISHIDA, Y. y PROCKOP, D. J. (1973): Collagen synthesis: localization of prolyl hydroxylase in tendon cells detected with ferritin-labeled antibodies. Science, 182,825.

OLSEN, B. R., BERG, R. A., KUSHIDA, Y. y PROCKOP, D. J. (1975): Further characterization of embryonic tendon fibroblast and the use of immunoferritin techniques to study collagen biosynthesis. J. Cell. Biol. 64, 340.

OLSEN, B. R., BERG, R. A., KIVIRIKKO, K. L. y PROCKOP, D J. (1973). Structure of protocollagen proline hydroxylase from chick embryos. Eur. J. Biochem. 35 135.

OLSEN, B. R. y PROCKOP, D. J. (1974): Ferritin-conjugated antibodies used for labeling of organelles involved in the cellular synthesis and transport of procollagen. Proc. Natl. Acad. Sci. USA, 71,-- 2033.

OLSON, R. L., NORDQUIST, J., and EVERETT, M. A., (1970): The role of epidermal lysosomes in melanin physiology. Brit. J. Derm., 83:189,

OLSSON, K. (1971): Properties of leucocytic protease.Clin Chim Acta 32, 339.

ORDMAN, L. J., and GILLMAN, T. (1966): Studies in the -- healing of cutaneous wounds. III. A critical comparison in the pig of healing of surgical incisions -- closed with sutures or adhesive tape based on tensile strength and clinical histological criteria. Arch. Surg. 93:911.

ORFANOS, C. E., and MAHRLE, G. (1973): Ultrastructures - and cytochemistry of human cutaneous nerve, J. Invest. Derm. 61:108.

ORFANOS, C. E. (1972): Feinstrukturelle Morphologie und Histopathologie der verhornenden Epidermis. p. -- 36. Stuttgart, Thieme Verlag,

ORFANOS, C. (1966): Elektronenmikroskopische Untersuchung glatter Hautmuskelfasern und ihrer Innervation. - Dermatologica, 132:445.

ORANGE, R. P., KALINER, M. A., y AUSTEN, K. F. (1971):-- The immunological release of histamine and slow-- reacting substance of anaphylaxis from human lung III. Biochemical control mechanins involved in-- the chemical mediators. En: Biochemistry of the- acute allergic reactions, Second International- Symposium. K. F. Austen y E-. L. Becker. Black--- well Scientific Publications. Oxford, págs 189. 204.

PAAVOLAINEN, O. y SUNDELL, B. 'The effect of dextranomer (debrisan) on hand burns. Ann Chir Gynaecol Fenn, unpubl, data.

PAAVOLAINEN, P. y SUNDELL, B. (1976): The effect of Dextranomer (debrisan) on hands burns. Ann. Chir. Gynaec. 65, 313-317.

PACE, W. E. (1976): Treatment of cutaneous ulcers with benzoyl peroxide. Canadian Medical Association Journal 115: 1101.

PACE, W. E. (1978): Beads of a dextran polymer for the local treatment of cutaneous ulcers. Journal of Dermatologic Surgery and Oncology 4: 678.

PAGE, R. C. y BENDITT, E. P. (1967): E.P.A. molecular defect in lathyritic collagen. Proc. Soc. Exp. Biol Med. 124·459-465.

PAI, M. P. (1972): Effect of varying oxygen tensions on-healing of open wounds. Surg. Gynecol. Obtet. 135 756.

PANKALAINEN, M.; ARO, H.; SIMONS, K. y KIVIRIKKO, K. I.-(1970): Protocollagen proline hydroxylase: molecular weigth, subunits and isoelectric point. Biochim. Biophys. Acta 221,559.

PANKEY, G. A. y CORTEZ L. M. (1978): Skin and Soft Tissue Bacterial Infection. In: Infections Disease Reviews, Holloway, W, J., editor. Mt. Kisco, New-

York, Futura, vol. 2, pp, 133-43

PANKEY, G. A. (1969): Manual of Antimicrobial Therapy, - Springfield, III, Thomas.

PANKEY, G. A. (1978): Sinusitis, bronchitis, and mycro-- plasmal pneumonia, Bull. N. Y. Acad. Med. 54:156-64.

PARISH, L. C. and COLLINS, E. (1979): Decubitus ulcers:- a comparative study. Cutis 23: 106.

PARK, E.; CHURCH, R. L. y TANZER, M. L. (1975): Immunological properties of procollagens obtained from -- the culture medium od dermatosparatic ceils. Immunology. 781,790.

PARKER, F. y ODLAND, G. F. (1966): A correlative biochemical and electron microscopic study of experimental atherosclerosis in the rabbit aorta, with special reference to the myo-intimal cell. Amer J. - Path, 48, 197.

PATHAK, M. A., SINESI, S. J. y SZABO, G. (1965): The effect of a single dose of ultraviolet radiation on epidermal melanocytes. J. Invest. Derm., 45:520.

PEACOCK, E. E. y W. VAN WINKLE, Jr.,In Wound Repair, W. B. Saunders Co., Philadelphia, Pa., (1976)

PEACOCK, E. E. y VAN WINKLE,(1976): W. Wound Repair. Philadelphia, W. B. Saunders Co.,

PEACOCK, E. E. y VAN WINKLE, (1976): The biochemistry an

the environment of wounds and their relation to -- wound strength In: Wound Repair. Philadelphia W.-- B. Saunders.

PEACOCK, E. E., MADDEN JW, TRIER WC, (1970): Some studies -- on the treatment of burned hands. Ann Surg 171 903.

PEARSE, A. G. E. :(1972): Histochemistry: Theoretical -- and Applied. ed. 3, p. 1056. Edinburgh, Churchill Livingstone.

PEASE, D. C. y QUILLIAM, T. A. (1957): Electron microsco py of the Panician corpuscle, J. Biophys. Biochem Cytol., 3:331.

PELLING, D. SHARRAT, M. y HARDY. J. (1973): The satety -- of medical plastics, I. An assessment of methods. Food Cosmet Toxicol. 11.69.

PENNEYS, N. S. FULTON, J. E.,Jr., (1970): Location of -- proliferating cells in human epidermis. Arch. J.-- Derm., 101:323.

PERDUE, J,F. (1973): The distribution, ultrastructure -- and chemistry of microfilaments in cultured chick embryo fibroblasts. J. Cell Biol. 58,265.

PETERKOFSKY, B. y PRATHER, W. B. (1975): Increased colla gen synthesis in Kirsten sarcoma virus-transfor-- med BALB 3T3 cells grown in the presence of cyc-- lic AMP, Cell. 3, 291.

PETERKOFSKY, B. y UDENFRIEND, S. (1965): Enzymatic hydroxylation of proline in microsomal polypeptide leading to formation of collagen. Proc. Natl. Acad. Sci. USA, 53,735.

PETERSEN, N. C. y BITTMAN, S. (1971): The Epidemiology - of Pressure Sores. Scandinavian Journal of Plastic and Reconstructive Surgery, 62-66.

PHILLIPS, A:, DAVIDSON, M. y GREAVES, M. W.(1977): Venous -- leg ulceration evaluation of zinc treatment. - serum zinc and rate of healing. Clinical and Experimental Dermatology 2:395.

PIKE, J. E.,F. P.KUPIECKI, y J. R. WEEKS . (1967):Biological activity of the prostaglandins and related-analogs, In: Nobel Simposium 2:Prostaglandins, -- edited by S. Bergström and B.Samuelsson. Stock -- holm: Almqvist and Wiksell; New York: Interscience, p. 161-172.

PICKLES, V. R. (1967): The prostaglandins. Biol. Rev. -- Cambridge Phil. Soc. 42:614-652.

PINKUS, H. (1972): Anatomy and histology of skin. In Graham, J. H., Johnson, W. C. and Helwig, E. B. (eds) Dermal Pathology, p. 1. Hagerstown, Harper and - Row.

PINNELL, S.R. (1978): Disorders of collagen.En:The metabolic basis on inherited disease (Stanbury, J. B. Wyndaarden, J. B. y Fredrickson, D.S.) Edit. Mc

Graw-Hill, New York 1366-1394.

PINNEL, S. R.; FOX, R. y KRANE, S.M. (1971): Differences in glycosylated hydroxylysines in skin and bone . Biochim. Biophys. Acta. 229,119.

PIPER, P. J. and VANE J. R. (1969): The release of additional factors in anaphylaxis and its antayby antiinflammatory drugs. Nature (Lod.) 223. 29-35.

PINKUS, H. (1970): The direction of growth of human epidermis. Brit.J. Derm., 83:556.

PLATT, L. I. y KAILIN, E. W. (1964):Sex chromatin freque ney. J.A.M.A., 187:182.

POLLACK. S. V. WOUND HEALING: a review.(1979): I. biology of wound healing. J. Dermatol. Surg. Oncol. 5: 389-393.

POLLACK, T. D. y WEIHING, R. R. (1974): Actin and myosin and cell mocement. CRC Crit. Rev. Biochem. 2,1.

PONTZ, B. F.; MULLER, P. K. y MEIGEL, W. N. (1973): A -- study on the conversion of procollagen: Release - and recovery of procollagen peptides in the cultu re medium. J. Biol. Chem. 248,7558.

POPENOE, E.A. y ARONSON, R.B. (1972): Partial purification -- and properties of collagen lysine hydroxylase from chick embrios. Biochim. Biophys Acta. 258, - 380.

POSTLEHWATT, R. W., WILLIGAN, D. A. (1975): Human tissue

reaction to sutures. Ann Surg 181, 144.

PRATT, ROSALIE, (1971): Treatment of Established Pressure Sores. Nursing Times, 662,663.

PROCKOP, D.J. y GUZMAN N.A. (1977):Collagen diseases and the biosynthesis of collagen. Hosp. Practice 12 - (12):61-68.

PROCKOP, D.J. y JUVA, K. (1965): Synthesis of hydroxyproline in a precursor of collagen.Biochemistry, 53, 661.

PROCKOP, D.J. ; WEINSTEIN, E. y MULVENY, T. (1966): Hydroxylation of lysine in a polypeptides.

PURSSEY, B.S. (1970): The use of an aerosol antibiotic - in minor surgery. Med. J. Aust. 1:989.

QUEVEDO, W. C., SZABO, G., VIRKS, J., y SINESI, S,J.P. - (1965): Melanocyte populations in UV-radiated human skin. J. Invest. Derm., 45:295.

RAHAL, J.J. y SIMBERKOFF, M.S.(1978): Adverse Reaction - to Anti-Infective Agents, In: Disease-a-Month, - Dowling, H.F. editor Chicago, Year Book Med. Publishers, vol.25 pp 1-67.

RAISZ, L.G. y KOOLEMANS-BEYNEN, A.R. (1974): Inhibition of bone collagen Synthesis by prostaglandin E_2 in organ culture. Prostaglandin, 8, 377.

RAMWELL, P. W. y SHAW, J. F. (1963): The spontaneous and evoked release of noncholinergi stances from the-

cerebral cortex of rats. Life Sci, 2. 419-426.

RAMWELL, P. W. and SHAW, J. E. (1966): Spontaneous and - evoked release of prostaglandins frai cerebral - cortex of anesthetized cats. Amer J. Physiol 211. 125-134

RAMWELL, P. W., SHAW J.E., y KUCHARSKI J. (1965): Prostaglandin release from the rat nerve-disphragm preparation. Science 149. 1390-1391.

RAO, DB. SANE, PC. GEORGIEV, EL. (1975): Collagenase in-the treatment of dermat and cutaneous uicers. J. Am Geriatr Soc. 23:22,

RAMACHANDRAN, G.N.; BANSAI, M.y BHAINAGAR, R.S. (1973):A hypothesis on the role of hydroxyproline in stabilizing collagen structure. Biochim. Biophys. Acta 322,166.

RAMACHANDRAN, G.N.; BANSAI, M. y RAMAKRISHNAN, C. (1975) Hydroxyproline stabilizes both intrafibrillar -- structure as well as inter-protofibrillar linka-- ges in collagen, Curr. Sci. 44,1

RASH, J.E.; BIESELE, J.J. y GEY, G.O. (1970): Thee cla-- ses of filaments in cardiac differentiation, J. - Ultrastruct. Res 33, 5-6, 408-435.

RASH, J. E.; McDONALT, T.F.; SACHS,H. G. y FUERT, J.D. - (1972): Muscle-like arrays in a fibroblast. line. Nature, new , Biol. 237,160

REDDICK, M.E.; BAUER, E.A. y EISEN, A.Z. (1974): Immunocytochemical localization of collagenase in human skin.An fibroblasts in monolayer culture. J. Invest. Dermatol, 62/4, 361.

REDFERN, S.J., JENEID, P.A. GILLINGHAM, M.S. y LUNN, H.F (1973). Local Pressures with Ten Types of Patient Support System. Lancet ii 277-280.

REES, K.R. (1967): Lysosomes and skin injury. Trans, St. John's Hosp. Derm. Soc., 53:107,

REHTIJARVI, K. (1963): Reticular network and karyometric properties of lymphomas of the skin. Acta dermato ven., 43 Suppl. 53.

REID, K/B/ (1974): A collagen-like amino acid sequence - in a polypeptide chain of human C_{17}(a subcomponent of the first component of complement). Biochem. J 141,189.

REVEL, J.P. y HAY, E.D. (1963): An autoradiographic and-electron microscopic study of collagen synthesis in differentiating cartilage, Z. Zellforsch. Mikrosk. Anet. 61,110.

RISTELI, L.; MYLLYLA, R. y KIVIRIKKO, K.I, (1976): Partial -- purification and characterization of collagen-galectosyltransferase from chick embryos. Bio--- chem. J. 155,145.

RHOADS, J.E., FLIEGELMAN, M.T. and PANZER, L.M. (1942) :

The mechanism of delayed wound healing in the presence of hypoproteinemia. J.A.M.A. 118:21-25.

RHOADS, R.E. y UDENFRIEND, S,(1968): Decarboxylation of-alfa-ketoglutarate couplet to collagen proline hydroxylase. Proc, Acad. Sci. USA 60,1473.

RHOADS, R.E. y UDENFRIEND, S. (1970): Purification and - properties of collagen proline hydroxylase from - newborn rat skin. Arch. Biochem. Biophys. 139,329

RHOADS, R.E.; UDENFRIEND, S. y BORNSTEIN, P. (1871): In vitro enzymatic hydroxylation of prolyl residues- in the alfal-CB2 fragment of rat collagen. J. Biol -- Chem.246,4138.

RHODIN, J.A.G. (1962): Fine estructure of vascular walls in mammals: with special reference to smooth muscle component. Physiol. Rev. 42, suppl. 5,48.

ROBINS, S.P. y BAYLEY, A.J. (1973): Relative stabilities of the intermediate reducible crosslinks present- in collagen fibres. F.E.B.S. Letters, 33,167.

ROBINS, S,P.y BAILEY, A.J. (1975): The chemistry of the collagen cross-links: The mechanism of stabilization of the reducible intermediate cross-links . Biochem. J. 149,381.

ROBINS, S.P.; SHIMOKOMAKI, M. y BAILEY, A.J. (1973): Age related changes in the reducible components of intact bovine collagen fibres. Biochem J. 131, 771.

ROBSON, M.C., DUKE, W.F. y KRIZEK, T.J. (1973): Rapid - bacterial screening in the treatment of civilian- wounds. J. Surg. Res. 14:426.

ROENIGK, H.H. y YOUNG, J.R. (1975): Leg ulcers. Medical- and surgical management. Harper y Row, New York.

ROENIGK, H. (1979): Dextranomer as a postoperative derma brasion dressing. Presented at the 3rd Internatio nal Symposium on Plastic and Reconstructive Surge ry, New Oreleans. April 29- may 4 .

ROJKIND, M.; GUTIERREZ, A.M.; ZEICHNER, M. y LENT, R.W.- (1969): The nature of the intramolecular cross- - links in collagen. Biochem. Biophys. Res. Commun. 36,350.

ROJKIND, M. y KERSHENOBICH, D. (1975): Regulation of co- llagen synthesis in liver cirrhosis. Inhibition - of fibrogenesis in rats and human. En: Collagen - metabolism in the liver. Stratton, New York págs. 129-138.

ROJKIND, M. y MERSHENOBICH, D. (1975): Effects.of colchi cine on collagen, albumin and transferrin synthe- sis by cirrhotic rat liver slices. Biochim. Bio-- phys. Acta 378,415.

ROLAND, J. (1976): Fibroblaste et myofibroblaste dans le processus granulomateux. An . Anat.Pathol (Paris) 21,34.

ROLAND, J. y ROSNOWSKI, A. (1974): L'endartérite experimentale chez le lapin. Etude de l'elastogénése . Paroi Artérielle- Arterial Wall, 2, 29.

ROMASZ, R,S.; BARNHART, B.S. (1978):Application of dextranomer beads in the treatment of exudating skin lesions: results of a cooperative study. Angiology 29:675.

RONNEMAA, T.; JUVA, K. y KULONEN, E. (1975):Effect of hyperlipidemic rat serum on the synthesis of collagen by chick embryo fibroblasts. Atherosclerosis, 21,315.

ROSS, R. y BENDITT, E.P. (1962): Wound healing and collagen formation. II. Fine structure in experimental scurvy. J. Cell. Biol. 12:533-551,

ROSS, R. y BENDITT, E,P. (1965): Wound healing and collagen formation. V. Quantitative electron microscopic radioautographic observatións of proline H^3 - utilization by fibroblasts. J. Cell Biol., 27:83.

ROSS, R. y KLEBANOFF, S.J. (1971): The smooth cell, J. - In vivo synthesis of connective tissue proteins. J. Cell Biol. 50,1.

ROSS, R. (1971): The smooth muscle cell. II. Growth of smooth muscle in culture and formation of elastic fibers. J. Cell Biol. 50,1.

ROSS, R. (1968): The fibroblast and wound repair. Biol.

Rev. 43:51.

ROSTENBERG, A., WASSERMANN, E, MEDANSKY RS (1958): Sugar pasta in the treatment of leg ulcers. Arch Dermatol 78; 94.

ROTHMAN, U. (1974): Teoretiska synpunkter pa kromatograf i sar. Svensk Kir 31: 2.

ROWDEN, G. (1968): Aryl sulfatase in the sebaceous glands of mouse skin. J. Invest. Derm., 51:41.

RUDALL, K.M. (1968): Comparative biochemistry of collagen In "Treatise on Collagen", Vol. 2A (ed. Gould,B. S.), P. 125. Academic Prss, London and New York.

RUPEC, M. y BRAUN-FALCO. (1968): Zur Frage IYSOSOMALER-Aktivität in normalen menschlichen Talgdrüsen. - Arch, klin, exp. Derm., 232: 312.

RUPEC, M. (1969): Zur Ultrastruktur der Talgdrüsen-zelle Arch, klin, exp, Derm., 234:273.

RYAN,G.B.; CLIFF, W.J.; GABBIANI, G.; IRLE, G.; MONTANDON, D.; STATKOV, P.R. y MAJNO, G. (1974): Myofibroblasts in human granulation tissue. Human Path 5,55.

RYAN, G.B.; CLIFF, W.J. PHILL, D.; GABBIANI, G. IRLE, C. STATKOV, P.R. y MAJNO, G.(1973): Myofibroblasts - in an avascular fibrous tissue. Lab. Invest. 29. 179.

RYAN, G.B. CLIFF, W.J. GABBIANI, G. (1974): Myofibro ---

blasts in human granulation tissue. Hum. Pathol . 5:55,

RYHANEN, L. (1975): Hydroxylation of lysyl residues in - lysine-rich and arginine-rich histones by lysyl - hydroxylase in vitro. Biochim. Biophys. Acta 397, 50.

RYHANEN, L. y KIVIRIKKO, K.I. (1974): Developmental changes in protocollagen lysyl hydroxylase activity - in the chick embryo. Biochim. Biophys. Acta 343,- 121.

SAGEBIEL, R.W.(1972): In vivo and in vitro uptake of ferritin by Langerhans cells of the epidermis. J.Invest. Derm., 58:47.

SALISBURY, R.E. (1973): Post-burn edema of the upper extremity: evaluation of present treatment, J. Trauma 13,857.

SALPETER, M.M. (1968): H^3-proline incorporation into cartilage: electron microscope autoradiographic observations. J. Morphol. 124,387.

SANCHEZ, G. DIAZ-FLORES, L.; HERNANDEZ, G. GAYOSO, M.J.y CABALLERO, T. (1978): Revisión conceptual del Mio fibroblasto. Morfol. Norm.y Patol. Sec. A, 2, 119

SANDBERG, L.B.; WEISSMAN, N. y SMITH, D.W. (1969): The - purification and partial characterization of a soluble elastin-like protein from copperdeficient -

porcine aorta. Biochemistry. 8, 2940.

SAMUELSSON, B. (1963): Isolation and identification of prostaglandins from human seminal plasma. J. biol. Chem. - 233. 6229-6234.

SANDSTEAD, H. H. y SHEPARD, G. H. (1968): The effect of zinc deficiency on the tensile strength of healing surgical incisions in the integument of the rat. Proc. Soc. Exp Biol. Med. 128: 684-689.

SANDBLOM, P. (1944): The tensile strength of healing wounds. Acta Chir. Scand. 90 (Suppl): 8.

SAWYER, P. N.; DOWBAK, G.; SOPHIE, Z. FELLER, J. y COHEN, L. (1979): A preliminary report of the efficacy of debrisan in the debridement of cutaneous ulcers. Surgery, - 85:201.

SAWYER, P. N.; SOPHIE, Z.; DOWBAK, G. COHEN, L. y FELLER, J. (1978): New aprosches in the therapy of the peripheral vascular ulcer. Angiology 29:666.

SCALES, J. T. (1963): Wound healing and the dressing. Br. J. Indust. Med. 20, 82.

SCALES, J. T., LUNN, H. F., JENEID, P. A., GILLINGHAM, M. E.- y REDFERN, S. J. (1974): The Prevention and Treatment of Pressure Sores using Air-Support Systems. Int. J. - Paraplegia. 12:118.

SCARPELLI, D. G., y GOODMAN, R. M. (1968): Observations on the fine structure of the fibroblast from a case of Ehlers

Danlos syndrome winth the Marfan syndrome. J. Invest.-Derm., 50:214.

SCRUTTON, M. C., WU. C. W., y GOLDTHWAIT, D. A. (1971): The presence end possible role of zinc in RNA polymerase - obtained from E. Coli. Proc. Natl. Acad. Sci. USA 68: 2497-2501.

SCHAUMBURG-LEVER, G. y LEVER, W. F. (1975): Secretion from human apocrine glands. J. Invest. Derm. , 64:38.

SCHIEFFERDECKER, P. (1922): Die Hautdrüsen des Menschen und - der Säugetiere, ihre biologische und rassen-anatomische Bedeutung, sowie die Muscularis sexualis. Zentralbl. - Biolog. 37:534, (1917): Also Stuttgart, F. Enke.

SCHIFFMAN, E. y MARTIN, G. R. (1970): Spontaneous generation of cross-links in aldehyde-containing collagen. Arch. Biochem. Biophys. 138, 226.

SCHIMPFF, S. C., MILLER, R. M., POLAKAVETZ, S., y HORNICK, R. B. (1974): Infection in the severely traumatized pa---tient. Ann. Surg. 179:352-57.

SCHMIDT, W. (1968): Die normale Histologie von Corium und subcutis. In Marchionini, A. (ed).: Handmuchder Haut-und Geschlechtskrankheiten, Ergänzungswerk. Vol. I, part 1 p. 430. Berlin, Springer.

SCHOFIELD, J. D. y PROCKOP, D. J. (1973): Procollagen a precursor from of collagen. Clin. Orthop. 97, 175.

SCHOFIELD, J. D., UITTO, J. y PROCKOP, D. J. (1974): Formation

of interchain disulfife bonds on helical structure during biosynthesis of procollagen by embryonic tendon - cells. Biochemistry, 13, 1801.

SCHREINER, E., y WOLFF, K. (1969): Die Permeabilität des epidermalen Intercellularraums für kleinmolekulares Protein. Arch. Klin. Exp. Derm., 235:78.

SEIFERT, H. W. y KLINGMULLER, G.: (1972): Elektronenmikroskopiche Struktur normaler Kapillaren und das Verhalten - alkalischer Phosphatase. Arch. Derm. Forsch 242:97.

SEIFTER, E., CROWLEY, L. V. RETTURA, G. (1975): Influence of vitamin A on wound healing in rats with femoral Fracture. Ann. Surg. 181:836-841.

SEIFTER, E. RETTURA, G. SEIFTER, J. (1973): Thymotropic action of Vitamin A. Fed. Proc. 32: 947 abs.,

SEIJI, M., SHINAO, K., FITZPATRICK, T. B. y BIRBECK, M. S. C. (1961): The site of biosynthesis of mammalian tyrosinase. J. Invert. Derm., 36:359.

SEVITT, S., (1957): Pathology and therepeutic applications. - London. Butterworth y Co. Ltd.

SHELDON, V. POLLACK, M. D. (1979): The Biology of Wound Healing. J. Dermatol. Surg. Oncol. 5:5 May.

SHELDON, V. POLLACK, M. D. (1979): Environmental Factors Affecting Wound Healing. J. Dermatol. Surg. Oncol. 5:6 June

SHELDON, V. POLLACK, M. D. (1979): Nutritional Factors Affecting Wound Healing. J. Dermatol. Surg. Oncol. 5:8 Augus

SHERR, C. J., TAUBMAN, M. B. y GOLDBERG, B. (1973): Isolation of a disulfide-stabilized, three-chain polypeptide -- fragment unique to a precursor of human collagen. J. - Biol. Chem. 248, 7033.

SHERRY, S. (1966): Fibrinolytic mechanims in tissue injury. - Gastroenterology, 51, 201.

SHULMAN, A. G. y KROHN, H. L. (1967): Influence of hyperbaric oxigen and multiple skin allografts on the healing of- skin wounds. Surgery 62:1051.

SIEGEL, R. C. (1974): Biosynthesis of collagen cross-links. - Increased activity of purified lysyl oxidase with te-- constituted collagen fibrils. Proc. Natl. Acad. Sci. - USA, 71, 4826.

SIEGEL, R. C. y MARTIN, G. R. (1970): Collagen cross-linking. Enzymatic synthesis of lysine-derived aldehydes and -- the production of cross-linked components. J. Biol. -- Chem. 245, 1653.

SIEGEL, R. C.; PINNELL, S. R. y MARTIN, G. R. (1970): Cross-- linking of collagen and elastin: Properties of lysyl - oxidase. Biochemistry, 9, 4486.

SILVER, I. A. (1972): Oxygen tension and epithelialization. - In: Maibach, H. I. and Rovee, D. T. eds. Epidermal -- Wounds Healing. Chicago, year Book Medical Publishers pp. 291-305.

SHIO, H. RAMWELL, P. W. ANDERSEN, N. H. y COREY, E. J. (1970)

Stereospecificity of the glandin 15-dehydrogenase from swine lung. Experientia (Basel) 26: 355-357.

SLATER, J. P. MILDVAN, A. S. y LOED, L. A. (1971): Zinc in DNA polymerases. Biochem. Biophys. Res. Commun. 44:37-43.

SLATER, R. M., HUGHES, N. C. (1971): A simplifield method of-treating burns of the hands. Br. J. Plast. Surg. 24: 206.

SMITH, J. G. Jr. (1963): The dermal elastòses. Arch. Derm. 88 382.

SMITH, J. E., BROWN, E. D. y SMITH, J. C. Jr. (1974): The effect of zinc deficiency on the metabolims of retinol binding protein in the rat. J. Lab. Clin. Med. 84:692-697.

SMITH, K. R. Jr. (1970): The ultrastructure of human Haarschei be and Merkel cells. J. Invest. Derm. 54:150.

SMITH, C. T. y ALLISON, D. J. (1965): Skin and femur collagen of cortisone-treated rats. Endocrinilogy 77, 785.

SMYTHE, P. M., BRERETON-STILES, G. G. GRACE, H. J. (1971): Thymolympathic deficiency and depression of cell mediated immunity in protein-calorie malnutrition Lancet. 2:939-943.

SOUL, J. (1978): A trial of debrisan in the cleasing of infected surgical wounds. Bristish Journal of Clinical Practice. 32: 172.

Stereospecificity of the glandin 15-dehydrogenase from swine lung. Experientia (Basel) 26: 355-357.

SLATER, J. P. MILDVAN, A. S. y LOED, L. A. (1971): Zinc in -- DNA polymerases. Biochem. Biophys. Res. Commun. 44:37-43.

SLATER, R. M., HUGHES, N. C. (1971): A simplifield method of-treating burns of the hands. Br. J. Plast. Surg. 24: 296.

SMITH, J. G. Jr. (1963): The dermal elastoses. Arch. Derm. 88 382.

SMITH, J. E., BROWN, E. D. y SMITH, J. C. Jr. (1974): The --- effect of zinc deficiency on the metabolims of retinol binding protein in the rat. J. Lab. Clin. Med. 84:692-697.

SMITH, K. R. Jr. (1970): The ultrastructure of human Haarscheibe and Merkel cells. J. Invest. Derm. 54:150.

SMITH, Q. T. y ALLISON, D. J. (1965): Skin and femur collagen of cortisone-treated rats. Endocrinilogy 77, 785.

SMYTHE, P. M., BRERETON-STILES, G. G. GRACE, H. J. (1971): - Thymolympathic deficiency and depression of cell mediated immunity in protein-calorie malnutrition Lancet. - 2:939-943.

SOUL, J. (1978): A trial of debrisan in the cleasing of infected surgical wounds. Bristish Journal of Clinical Practice. 32: 172.

SOLOMON, L. M., JUHLIN, L. y KIRSCHENBAUM, M. B. (1968): Prostaglandins on cutaneous vasculare. J. Invest. Derm. 51 280-282.

SOLTERMANN, W. (1956): Die Bedeutung des Eisennachweises in der Haut für die Diagnose einer Hämochromatose unter besonderer Berücksichtigung der Axillargegend und der apokrinen, Schweissdrüsen. Dermatologica, 112: 335.

SPEAKMAN, P. T. (1971): Proposed mechanism for the biological assembly of collagen triple helix. Nature (Lond). 229, 241.

SPEARMAN, R. I. C. (1970): Some light microscopical observations on the stratum corneum of the guineapig. man and common seal. Brit. J. Derm., 83: 582.

SPECTOR, W. G. y WILLOUGHBY, A. (1968): The pharmacology of inflammation. The English University Press Ltd., London.

SPIRA, M. MILLER, J. HARDY, SB. GEROW, FJ. (1967): Silicone bag treatment of burned hands. Plast Reconstr. Surg 39: 357.

SPIRO, M. J. y SPIRO, R. G. (1971): Studies on the biosynthesis of the hydroxylysine-linked disaccharide unit of basement membranes and collagens II. Kidney galactosyl transferase. J. Biol. Chem. 246. 4910.

SPIRO, R. G. (1969). Characterization and quantitative determination of the hydroxylysine-linked carbohydrate units

of several collagens. J. Biol. Chem. 244, 602.

SPIRO, R. G. (1967): The structure of the disaccharide unit - of the renal glomerular basement membrane. J. Biol. -- Chem. 242, 4813.

SPIRO, R. G. y FUKUSHI, S. (1969): The lens capsule. Studies on the cardohydrate units. J. Biol. Chem. 244, 2049.

SPIRO, R. G. y SPIRO, M. J. (1971 a): Studies on the biosyn-- thesis of the hydroxylysine-linked disaccharide unit - of basement membranes and collagen I Kidney glucosyl- transferase, J. Biol. Chem. 246, 4899.

SPIRO, R. G. y SPIRO, M. J. (1971 b): Studies on the biosyn-- thesis of the hydroxylysine linked disaccharide unit of bassement membranes and collagens III. Tissue and - subecellular distribution of glucosyltransferase and - the effect of various conditions on the enzyme levels. J. Biol. Chem. 246, 4919.

STACHURSKA, J. SZPILMAN, H. y PAZDUR, J. (1966): coagulation and fibrinolytic system in patients with. Rheumatoid Arthritis. Reumatologica (Warsz) 4, 131.

STARICCO, R. J. y PINKUS, H. (1957): Quantitative and quali- tative data on the pigment cells of adult human epider mis, J. Invest. Derm. 28:33.

STARK, M.; LENAERS, A.; LAPIERE, C. M. y KUHN, K. (1971): Elec tronoptical studies of procollagen from the skin of -- dermatosparxic calves. FEBS Letters, 18:225.

STASSEN, E. L. H. (1975): The substrate specificity of lysyl-oxidase from embryonic chick cartilage. Fed. Proc. 34, 697.

STOLTZ, M.; FURTHMAYR, H. y TIMPL, R. (1973): Increased lysine hydroxylation of the additional residues. Biochim. Biophys. Acta 310, 461.

STOUGHTON, R. y WELLS, G. (1950): A histochemical study on polysaccharides in normal and diseased skin. J, Invest.-Derm. 14:37.

SUSI, F. R. BELT, W. D. y KELLY, J. W. (1967): Fine structure of fibrillar complexes associated with the basement -- membrane in human oral mucosa. J. Cell Biol. 34:686.

SUSKIND, R. R. (1951): The chemistry of the human sebaceous - gland. I. Histochemical observations. J. Invest. Derm. 17:37.

SYKES, P. J. and BAILEY, B. N. (1976): Treatment of hand burns with occlusive bags: a comparison of 3 methods. Burns 2, 162.

SZABO, G., GERALD, A, B., PATHAK, M. A. y FITZPATRICK, T. B. (1970): The ultractructure of racial color differences in man. Abstract, VII. Internat. Pigment. Cell Confe-- rence. J. Invest. Derm., 54:98.

SZABO, G. (1967): Tyrosinase in the epidermal melanocytes of-white human skin. Arch. Derm. 76:324.

TANZLR, M. L., CHURCH, R. L., YAEGER, J. A. y PARK, E. (1975)

The multi-step pathway of collagen biosynthesis: Procollagen intermediates, in Extracellular Matriz Influences on Gene Expression, edited by H. C. Slavkin, Chap. 73, pp. 785-793. Academic New York.

TANZER, M. L., CHURCH, R. L., YAEGLR, J. A., WAMPLER, D. E. y PARK, E. (1974): Procollagen: Intermediate forms containing several types of peptide chains and non-collagen peptide extensions at NH_2 and COOH ends. Proc. Nat Acad. Sci. USA 71, 3009.

TANZER, M. L., (1973): Cross linking of collagen: Endogenous-aldehydes in collagen react in several ways to form - a variety of unique covalent cross-links Science, 180, 561.

TANZER, M. L., y MECHANIC, G. (1970): Isolation of lysinonorleucine from collagen. Biochem. Biophys. Res. Commum,-32, 183.

TARNOWSKI, W. M. (1970): Ultrastructure of the epidermal melanocyte dense plate. J. Invest. Derm. 55:265.

TEN CATE, A. R., DE PORTER, A. A. (1975): The gradative ole - of the fibroblast in the remodelling and turnover of - collagen in soft connective tissue. Anat. Rec, 182,1.

THE UNITED STATES PHARMACOPCIA (1975): Mineteenth revision. p. 646. United States 1 'Pharmacopcial Convention, Inc Rockville, Md.

THOROUGHMAN, J. C., WALKER, L. G., and Collins, J. (1968): --

Spreanding organims by peritoneal lavage. Am. J. Surg. 115: 339-40.

TIMPL, R., WICK, G., FURTHMAYR, H., LAPIERE, C. M. y KUHN, K. (1973): Immunological prosperties of procollagen from dermatosparactic calves. Eur. J. Biochem. 32, 584.

TIMPL, R. (1976): Immunological studies on collagen: in Ramachandra and Reddi, Biochemistry of collagen. pp. 319-345. (Plenum, New York).

TODA, K., HORI, Y., and FITZPATRICK, T. B. (1969): The site - of tyrosinase activity within the melanosome. J. Invest Derm., 52: 380.

TONDER, O. y GUNDERSEN, T. (1971): Nature of the fluid in serous otitis metith. Arch. Otolaryngol 93, 473.

TOSHIMA, S., MOORE, G. E., and SANDBERG, A. A., (1968): Ultrastructure of human melanoma in cell culture. Electron - microscopic studies. Cancer, 21: 202.

TRAUB, W., y PIEZ, K. A. (1975): The chemistry and structure of collagen. Adv. Protein. Chem. 25, 243.

TREISTAD, R. L. (1971): Vacuoles in the embryonic chick cor-- neal epithelium, an epithelium which produces collagen J. Cell. Biol. 48, 689.

TRENCHEV, P., CNEYD, P. y HOLBOROW, E. J., (1974): Immunofluorescent tracing smooth muscle contractile protein antigens in tissues other than smooth muscle. Clin. Exp. - Immunol. 16, 125.

TUDERMAN, L., KUUTTI, E. R. y KIVIRIKKO, K. I. (1975): An -- affinity-column procedure using-poly- (L-proline) for the purification of prolyl hydroxylase. Purification - of the enzyme from chick embryos. Eur. J. Biochem. 52, 9.

UITTO, J., DEHM, P. y PROCKOP, D. J. (1972): Incorporation of cis-hydroxyproline into collagen by tendon cells: Failure of the intracellular collagen to assume a triple helical conformation. Biochim. Biophys. Acta. 278, 601

UITTO, J. y PROCKOP, D. J. (1973): Rate of helix formation by intracellular procollagen and protocollagen: Evidence for a role for disulfide bonds. Biochem. Biophys. Res. Commum. 55, 904.

UITTO, J. y PROCKOP, D. J., (1974 a): Hydroxylation of peptide bonnd proline and lysine before and after chain completion of the polypeptide chains of procollagen. Arch. - Biochem. Biophys. 164, 210.

UITTO, J. y PROCKOP, D. J. (1974 b): Incorporation of proline analogues into collagen polypeptides: Effects on the - productions of extracellular procollagen and on the -- triple helical structure of the molecule. Biochim. --- Biophys. Acta, 336, 234.

UITTO, J. y PROCKOP, D. J. (1974 c): Molecular defects in collagen nad the definition of collagen disease. En: Molecular pathology. (Good, R. A., Day S. B. y Jorge, Y,)

Edit. Charles C. Thomas Springfield pág 670-688.

UITTO, J., and PROCKOP, D. J. (1974): Synthesis and secretion of underhydroxylated procollagen at various temperatures by cells subject to temporary anoxia. Biochem. --- Biophys. Res. Commum. 60:414.

UTKINA, O. T. (1964): Regeneration of the skin epithelium --- wounds under normal conditions and at reduced barome-- tric pressure. Biol. Abstr. 45:6280.

VAN SCOTT, E. J., and EKEL, T. M., (1963): Kinectics of hyperplasia in psoriasis. Arch. Derm. 88:373.

VAN WINKLE, W., Jr. (1967): The fibroblast in wound healing. Surg. Gynecol, Obstet. 124:369.

VANE, J. R. (1957): A sensitive method for the assay of 5-hydroxytryptamine. Brit. J. Pharmacol. 12:344-349.

VARA, LOPEZ, R. (1952): Ascorbimemia en el pre y postoperatorio. Rev. Esp. del Apt. Digestivo y de la Nutrición.

VARA, THORBECK, R. (1977): Generalidades, Patologia y Clini-- cas Quirúrgicas. Editorial Marban.

VARELA, H. DIAZ-FLORES, L., LINARES, J., SANCHEZ, G., y CABALLERO, T., (1978): Transformación de células endoteliales y pericitos en miofibroblastos. Estudio ultraestructural. Morfol. Norm. y Patol. Sec. A, 2, 215.

VARMA, AO, RUGATCH, E. GERMAN, FM. (1973): Debridement of dermal ulcers with collagenase. Surg. Gynecol. Obstet.136 281.

VIGUERA, M. G. and SUNAHARA, F. A. (1969): Microcirculatory - effects of prostaglandins. Canad. J. Physiol. Pharmac. 47. 627-634.

VOGT,W. and DISTELKOTTER, P. (1967): Release of prostaglandins Ed. S. Bergström and B. Samuelsson. Ahnqvist and Wiksell. Stockholm. pp. 237-240.

VOGT, N. W., KUNZE, H. LUFFT, E. and FABILLI, S. (1969): Entstechung von SRS-C in der durchströmten Meerschweinchenlunge durch Phospholipase A. Identifizierung mit - Prostaglandins. Naunyun-Schmiedebergs. Arch. exp. Path Pharmak. 262. 124-134.

VON EULER, U. S. Arch. Exptl. Pathol. Pharmakol., 175 (1934): 78; Klin. Wochschr., 33 (1935): 1182; J. Physiol. (London), 88 (1936): 213; Scand. Arch. Physiol., 81 (1939) 65.

VUUST, J. y PIEZ, K. A. (1970): Biosynthesis of the alfa --- chains of collagen studied by pulse-labeling in culture. J. Biol. Chem. 245, 6201.

WALLGREN. R. (1975): The therapeutic effect of Debrisan. A -- controlled clinical trial at the Aurora Hospital Hel-- sinki. On file, Pharmacia.

WEBER, K., and BRAUN-FALCO, O.: (1973): Ultrastructure of --- blood vessels in human granulation tissue. Arch. Derm. Forsch., 248:29.

WEEKS, J. R., (1972): Prostaglandins. Ann. Rev. Biochem. In -

press.

WEEKS, J. R., SCHULTZ, J. R. and BROWN, W. E. (1968): Evaluation of smooth muscle bioassays for prostaglandins E_1 and Fig. J. appl. Physiol. 25. 783-785.

WEEKS, J. R., SEKHAR, N. C. and DUCHARME D. W. Relative activity of prostaglandins E_1 A_1 E_2 and A_2 on lipolysis, platelet aggregation, smooth muscle and the cardiovascular system. J. Pharmacol. In press.

WEEKS, J. R. SCHULTZ, J. R. & BROWN, W. E. (1968): Evaluation of smooth muscle bioassays for prostaglandins E and F_1 A. J. Appl. Physiol. 88, 783.

WEINER, R. and KALEY, G. (1969): Influence of prostaglandins E_1 on the terminal vascular bed. Amer. J. Physiol.(London). 217. 563-566.

WEINSTEIN, G. D. (1965): Autoradiographic studies of turnover time and protein synthesis in pig epidermis. J. Invest Derm. 44:413.

WEINSTEIN, G. D., and FROST, P.: (1971): Methotrexate for psoriasis. Arch. Derm. , 103:33.

WEISS, P. (1955): Specificity in growth control. In: Butler, E. G., ed. Biological Specificity and Growth. Princeton, Princeton Univ. Pres, p. 195.

WEINSTOCK, M. y LEBLOND, C. P. (1974): Synthesis, migration - and release of precursor collagen by odontoblasts as-visualized by radioautography after (3H) prolineadmi--

nistration. J. Cell. Biol. 60, 92.

WENDT, P.; FIETZEK, P. C. y KUHN, K. (1972): The covalent -- structure of collagen: The tryptic, Thermolytic and -- chymotryptic peptides of alfa-1 CB3 from calf skin collagen. FEBS Letters; 26, 69.

WENDT, P.; VON DER MARK, K.; REXRODT, F. y KUHN, K. (1972): - The covalent structure of collagen: The aminoacid sequence of the 112 residues aminoterminal part of peptide alfa-1-CB6 from calf skin collagen. Eur. J. Biochem 30, 169.

WERB, Z. y BURLEICH, M. C. (1974): A specific collagenase from rabbit fibroblats in monofalayer culture. Biochem. J.- 137, 373.

WESSELLS, N. K.; SPOONER, B. S.; ASH, J. F.; BRADLEY, M. O.; LUDUENA, M. A.; TAYLOR, E. L. A.; WRENN, J. T. y YAMADA, K. M. (1971): Microfilaments in cellular and developmental processe. Science, 171,135.

WHITNEY, R. J., (1953): The measurement of volume changes in human limbs, J. of Physiology. 121:1-27.

WILKINSON, D. S. (1970): Durch Dequalinium hervorgerufene Hautnekrosen. Bericht einer iatrogenen Epidemie. Hautarzt, 21:114.

WILLIAMS, G. (1970): The late phases of wound healing histologic and ultrastructural of collagen and elastic-tissue formation. J. Path. , 102:61.

WILLIAMS, T. J. y MORLEY, J. (1973): Prostaglandins as potentiators of increased vascular permeability in inflammation. Nature 246, 215.

WILLIAMSON, M. B., and FROMM, H. J. (1955): The incorporation of sulfur amino acids into the proteins of regenerating wound tissue. J. Biol. Chem. 212:705-712.

WILLIS, A. L., (1970): Identification of prostaglandin E_2 in rat inflammatory exudate. Pharmacol. Res. Commun. 2. - 297-304.

WILLIS, A. L., (1969): Parallel assay of prostaglandin-like - activity in rat inflammatory exudate by means of cascade superfusion. J. Pharm. Pharmacol. 21. 126-128.

WILLIS, A. L. (1969): Release of histamine, kinin and prostaglandins during carrageenin-induced inflamation in the rat in "Prostaglandins, peptides and amines" Ed. P. -- Mantegazza and E. W. Horton. Academic. Press. London. p. 21-28.

WINAND, R. (1972): Biosynthesis, organization and degradation of muscopolysaccharides. Arch. belg. derm. syph.28:35.

WINKELMANN, R. K., and HULTIN, J. V. (1958): Mucinous metaplasia in normal apocrine glanda. Arch. Derm., 78, 309.

WINKELMANN, R. K., and OSMENT, L. S. (1956): The Vater Pacinian corpuscle in the skin of the human finger tipe.-- Arch. Derm., 73:116.

WINKELMANN, R. K. (1960): Nerve Endings in Normal and Patholo

gic Skin. Springfield, Charles C Thomas,

WINTER, G. D. (1965): A note on wound healing under dressing. J. Invest. Dermatol. 45:299.

WINTER, G. D. (1962): Formation of the scab and the rate of epithelization of superficial wounds in the skin of the young domestic pig. Nature 193, 293.

WINTER, G. D. (1972): Epidermal reneration studied in the domestic pig. In: Maibach, H. I.. and Rovee, D. T. eds. Epidermal Wound Healing. Chicago.

WINTER, G. D. (1971): Healing of skin wounds and the influence of dressings on the repair process. In: Surgical dressings and wound healing (ed. K. J. Harkiss). Bradford Univ. Press.

WINTERBURN, P. J. y PHELPS, C. F. (1972): The significance of glycosylated proteins. Nature, 236, 147,

WIRMAN, J. A. (1976): Nodular fasciitis, a lesion of myofibroblast. Cancer. 38, 23-78.

WOLFF, K., and Schreiner, E.: (1967): An electron microscopic Brane Coating Granules, Keratinosomen) alsepidermale Lysosomen. Arch. klin. exp. Derm., 231, 1.

WOLFF, K., and SCHREINER, E. (1968): An electron microscopic study on the extraneous coat of keratinocytes and the intercellular space of the epidermis. J. Invest. Der. 51:418.

WOLFF, K., and SCHREINER, E. (1970): Epidermal lysosomes Electron microscopic cytochemical studies. Arch. - Derm. 101:276.

WOLFF, K., and SCHREINER, E. (1970): Uptake, intracellular transport and degradation of exogenous protein by Langerhans cells. J. Invest. Derm. 54:37.

WOLFF, K., and SCHREINER, E. (1971): Melanosomal acid -- phosphatase. Arch. Derm. Forsch., 241:255.

WOLLARD, H. H., WEDDELL, G., and HARPMAN, J. A. (1940): - Observations on neuro-historical basis of cutaneous pain. J. Anat., 74:413.

WOLFF, K., and WINKELMANN, R, K.(1967): The influence ultraviolet light on the Langerhans cell population and its hydrolytic enzymes in guinea pigs. J. In-- vest. Der. 48:531.

WOLFF, K. (1967): Die Langerhans-Zelle. Arch. klin. exp. Derm. 229:54, 76.

WOOLLEY, D. E. LINDBERG, K. A. GLANVILLE, R. W. y EVANSON J. M. (1975): Action of rheumatoid synovial collagenase on cartilage collagen. Different susceptibilities of cartilage and tendon collagen to collagenase attack, Eur. J. Biochem. 50, 437.

WREN, J. J. and SZCZEPANOWSKA, (1964): Chromatography of-lipids in presence of an antioxidant, 4-methyl-2,-6-di-tertbutylphenol. J. Chrm. 14. 405-410.

ACITA, H.; FOIDART, J. M. y KATZ, S. I. (1978): Localization of the collagenous coponent in skin basement membrane. J. Invest. Dermatolo. 70/4 191.

YONEHASU, K.; STROUD, F. M.; KIEDERMEIER, W. y BUTLER, W. T. (1971): Chemical studies on C1q: A modular of - immunoglobulin biology. Biochem. Biophys. Res. Commun. 43, 1388.

ZELICKSON, A. S. (1965): The Langerhans cell. J. Invest.- Derm. 44:201.

ZELICKSON, A. S. y MOTTAZ, J. H. (1968-I-) (1968-II) (1970 Localization of gold chloride and adenosine tri--- phosphatase in human Langerhans cells. J. Invest.- Derm. 51:345.

Epidermal dendritic cells. Arch. Derm., 98:652. The effect of sunlight on human epidermis. Arch. Derm. 101. 212.

ZELIECVSKI, A.; AGHAJATI, A.; STEINBERG, A.; HADAD, M. y URCA I. (1978): Conservative treatment of stasis-- ulcers of the lower limb. Angiology 29:832.

ZELLNER, P. R. (1972): Traumatiche Handverletzungen. Langenbecks. Arch. Chir. 332, 485.