

KA7804543

IAEA-R-1342-F

Applications of radioimmunoassay techniques in endocrine studies
(part of a coordinated programme on in vitro assay techniques)

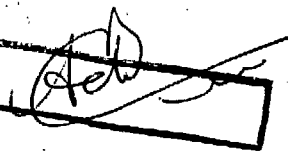
15 March 1973 - 31 August 1976

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INTERNATIONAL ATOMIC ENERGY AGENCY

INF 4 April 1977

CERTIFIED BY: 

FINAL REPORT.

- a) 1. CONTRACT NUMBER: 1342/RB.
- 2. TITLE OF PROJECT: "APPLICATIONS OF RADIOIMMUNOASSAY TECHNIQUES IN ENDOCRINE STUDIES".
- 3. INSTITUTE WHERE RESEARCH IS BEING CARRIED OUT: Dept. Physiology and Biophysics, Univ. de Chile.
- 4. CHIEF SCIENTIFIC INVESTIGATOR: Dr. Elisa T. Marusic.
- 5. TIME PERIOD COVERED: 1973-1976

b) DESCRIPTION OF THE RESEARCH CARRIED OUT:

The research carried out in this project has been oriented to set up the Radioimmunoassay techniques proposed in the original project, mainly the techniques related with the RIA of cortisol aldosterone and corticosterone and Angiotensin I (Plasma renin activity). Some Experimental and clinical work on aldosterone regulatory mechanisms was carried out.

- A) The radioimmunoassay for the measurements of plasma corticoids values was set up. These techniques were set up without the use of commercial kits.
- B) The radio^mimmunoassay to measure Plasma Renin Activity with our own reagents was also set up.
- C) Clinical and research studies measuring aldosterone, corticosterone and cortisol in control and hypophysectomized patients was carried out during this period. The diagnosis of primary aldosteronism was initiated with the techniques above mentioned. We are the only center in the Country that have the techniques for the measurement of aldosterone. Several communications were done in this field (see next page).
- D) The mechanism of action of potassium ions on aldosterone production was studied. The results were presented at Several International Meetings (see next pages).

c) RESULTS OBTAINED:

The results obtained during this project were summarized and presented in a Research Coordination Meeting on In-vitro Assay Procedures and Techniques, organized by Agency in London, dec. 1976. The results of this meeting are included.

Further details about the research done during this project are included in the several progress reports.

Most the research carried out were presented in several meetings. A list of the principal communications is included.

At the present, we are writing two papers and we have submitted me for publication in Endocrinology. The abstract of this paper is included.

A reprint of two of the papers published under Research Contract 1342 RB are included.

d) PUBLICATIONS

- Aguilera, G., A.White and E.T. Marusic
The importance of Sodium Balance on the Effect of Angiotensin II in Aldosterone Production.
Acta Endocr. 84:104, 1975.
- Galli, S.M. and E.T. Marusic.
Adrenal steroid bioynthesis by the species of South America rodents: Octodon degus and Abrocoma benetti.
Gen Comparative Endocrinology 28:10, 1976

e) ABSTRACTS

- White, A., G. Xaus, G. Aguilera y E.T. Marusic.
Desarrollo de Técnicas radioinmunológicas para la determinación de hormonas esteroidales.
V Latinoamerican Congress of Nuclear Med. and Biol. Soc.
1974. La Paz Bolivia.
Rev. Biol. Med. Nucl. VII: 41, 1975.
- Galli, S.M., G. Aguilera y E.T. Marusic.
Importancia del potasio en la regulación de la secreción de la aldosterona.
Proceed XII Latinoamerican Congress of Physiological Sciences
p. 22, 1975, Colombia-Bogotá.

COMUNICATIONS.- CHILEAN MEETINGS:

- El sistema renina-angiotensina y la regulación de la aldosterona en la rata.
Xaus, G. y Marusic, E.T.
XVI Reunión Anual de Soc. de Biología de Chile, Marzo 1974.
- Influencia de los iones sodio y potasio en la producción de aldosterona.
Lobo, M.V. y Marusic E.T.
XVIII Reunión Anual Soc. Biol. Chile, noviembre 1975.
- Uso de restricción y sobrecarga de sodio en el diagnóstico del hipermineralocorticoidismo.
G. Valdés, J.A. Rodríguez, E.T. Marusic, N. Optica y J.M. López.
XXII Jornadas Medicina Interna, Soc. Médica de Stgo. diciembre 1975.
- Acción de la angiotensina II y del potasio sobre la glándula adrenal de perro.
Osses, L. y E.T. Marusic.
XIX Reunión Soc. Biol. Chile, noviembre 1976.
- Radioinmunoanálisis : estudio comparativo entre diversas técnicas para la determinación de actividad de renina plasmática. Campino, C y E. Marusic. III Jornadas Chilenas de Biología y Med. Nuclear, Stgo. 15-16 Octubre 1976.
- Respuesta aldosterónica precoz a la infusión de ACTH en la hipofunción hipofisiaria.
J.A. Rodríguez, E.T. Marusic y G. Valdés.
IX Jornadas de la Soc. Chilena de Endocrinología y Metabolismo y Diabetes.
Stgo., Diciembre 1976.

INTERNATIONAL MEETINGS:

- Importancia de la angiotensina en el control de la secreción de aldosterona.
Aguilera, G., A. White y E.T. Marusic.
8° Congreso Panamericano de Endocrinología, Buenos Aires, Argentina. Octubre 27 - Noviembre 2, 1974.
- Sistema multifactorial en el control de la aldosterona.
E.T. Marusic.
8° Congreso Panamericano de Endocrinología, Buenos Aires, Argentina, Octubre 27 - Noviembre 2, 1974.

- Desarrollo de Técnicas Radioinmunológicas para la determinación de Hormonas Esteroidales.
A. White., G. Xaus, G. Aguilera y E.T. Marusic
Proc. V Latin American Congress of Nuclear Med. and Bio. Soc.
1974. La Paz, Bolivia
- Importancia del potasio en la regulación de la secreción de la aldosterona.
S.M. Galli, G. Aguilera y E.T. Marusic.
Proc. XII Latin American Congress of Physiological Sciences,
p. 22, 1975 (Colombia, Bogotá)
- Dual Mechanism of Angiotensin Action in the Adrenal cortex.
E.T. Marusic, M.V. Lobo and L. Osses.
V International Congress of Endocrinology, Hamburgo, Julio 1976.

