

# On the shoulder of giants: A brief early history of leadership in the Department of Physiology of the University of the Philippines College of Medicine

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## ABSTRACT

*A walk through our beloved Salcedo Hall, a pre-war era behemoth completed in 1927, allows glimpses of a reinvigorated past full of legacies left by our department's forefathers. From Colonial to Post-war eras, those at the helm of the department have distinguished themselves in both realms of clinical medicine and scientific research. Beginning with studies on nutrition during the American period to the post-war introduction of innovative courses in medical training, each Chair directed efforts towards the relevant public health issues during their time. Now in our 70<sup>th</sup> year as a standalone department and the 2023 recipient of the Silver Cup for the Basic Sciences, Physiology remains formidable in the College of Medicine. With its newly modernized teaching and laboratory facilities, and recent reinfusion of new faculty, the department shall carry on its time honored tradition of excellence in education and research towards achieving optimal healthcare for all.*

A walk through the recently renovated second floor corridors of our beloved Salcedo Hall bestows the visitor with glimpses of a reinvigorated past. The building, after all, is a pre-war era behemoth completed in 1927 and formerly called the Medical Annex Building. Even now with a new facelift, its history can still be uncovered by peeling layer upon layer of legacies left by our department's forefathers.

### The American Period (1907-1927)

We were not always alone, but an amalgam of Basic Sciences as one of the eight (8) original departments in 1907 known as the Department of Pharmacology and Physiology of the Philippine Medical School situated on Malecon Drive (now Bonifacio Drive) in the old Manila Port Area. In 1910, a transfer to Herran Street (now Pedro Gil) accompanied the school's integration into the University of the Philippines as the College of Medicine and Surgery. Only in 1923 was the name shortened to the University of the Philippines College of Medicine (UPCM).<sup>1</sup>

Our first department head was Dr. Hans Aron (1907-1910) who conducted studies on the nutrition and diet of Filipinos<sup>2,3</sup> which was of great importance in the American Colonial Public Health System to provide inexpensive but adequate diets to the vastly undernourished population. Such studies addressing the *tropical problems in the New World* were also addressed by his successor, Dr. Alfred Shaklee (1910-1912) who in his discourse entitled *Experimental Acclimatization to the Tropical Sun*,<sup>4,5</sup> purported

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that death from heat stroke in experimental monkeys exposed to sunlight for varying periods in Manila did not depend on the quality of the sun's rays. The culprit is direct exposure to these rays, which causes an increase in body temperature, leading the animal to succumb to hyperpyrexia. He further asserted that animals of dark color died more quickly than those with light fur on account of greater heat absorption, and finally concluding, thus, that *the white organism* should not necessarily be regarded as a transgressor against nature in tropical colonies. Such double meanings in science do abound in history for whatever purpose they may have served.

Dr. Robert Gibson (1912-1919) followed and was legendary for instituting a 136-hour course on *Physiological Chemistry*, most likely a fruit of his PhD dissertation at Yale University.<sup>6</sup> Upon Dr. Gibson's return to his original position in the University of Minnesota, Dr. Daniel de la Paz took on the reins as the first Filipino Chair, momentarily breaking the sequence of appointments for the top post to only American professors. It was at this time that the department veered away from conventional lectures and encouraged the individual laboratory experience. The latter became known as the Father of Philippine Pharmacology and it was in 1922, under his administration, that the department was split into the Department of Pharmacology which remained under his leadership, and the Department of Physiology and Biochemistry under Dr. William S. Carter (1922-1925). Professor Carter was a former University of Texas Medical School Dean and Physiology Professor who was recruited during the post-Woodrow Wilson era which saw to the reversal of former Governor-General Francis B. Harrison's policy of Filipinization. The latter was a welcome reconstruction of the civil service system to give Filipinos the opportunity to serve in government. Anecdotes reveal Professor Carter's alignment with the prevailing sentiment as he publicly cooperated with university officials while remaining unimpressed and harboring contempt towards them in private.<sup>7</sup> He was also appointed as Vice Dean of UPCM (1922-1924) under its first Filipino Dean Fernando Calderon until he joined the Rockefeller Institute.

#### *Filipino Physiologists in the late 1920's until the Post-war era (1926-1958)*

The late 1920's marked an era of exponential change in the department which could be ascribed to two events: the move to the new Medical Annex Building and the emergence of Filipino Physiologists at the helm of leadership. The joint Department of Physiology and Biochemistry set-up permanent residence on the second floor of what was then described as an example of progressively modern architecture much like academic neoclassical buildings in the land of our American colonizers. To this day, although renamed after Juan Salcedo, one of our own department stalwarts between 1929 to 1940 before leaving for the US for further studies, its iconic façade remains a favorite spot for official faculty group pictures. You will at least see one such portrait in every department archive where members are strategically positioned between its massive columns and its raised steps akin to the frontages of Greek and Roman temples, no doubt symbolic of the daily homage to science our academics climbed on the way to the office.

It was in 1929 that Isabelo T. Concepcion (1926-1940) officially became the first Filipino Chair of the joint department after holding the post of Acting Head for several years before. Although remembered for his controversial opinions and numerous idiosyncrasies, he was a pioneer in the field of nutrition. Some of his notable works included: *The nutritive value and cost of the Philippine constabulary ration; A study of the food intake of the inmates of Welfareville; and A study of the nutritive value and cost of the fiambarrera luncheon.*<sup>8-10</sup>

Interestingly, the latter research was a look at the contents of the *fiambarrera*, a traditional lunch box, brought daily by fellow college faculty and employees. A major conclusion of his studies was that the Filipino diet lacked nutritional value and may be the cause of malnutrition. (Figure 1)

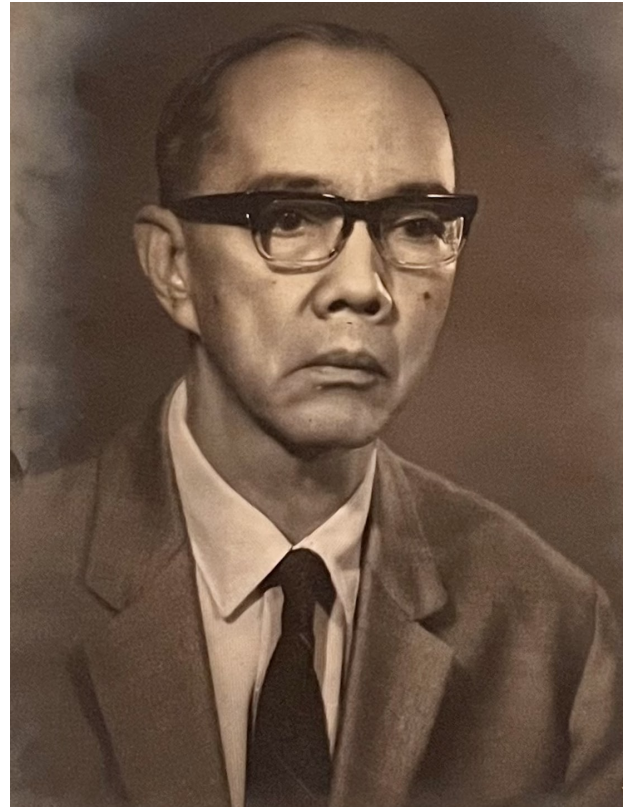


**Figure 1: Dr. Isabelo T. Concepcion (1926-1940) officially became the first Filipino Department Chair.**

It is no mystery why there is no recorded department chair between 1940-1945. During the Second World War, most educational activities were at a standstill, and at its height the University suffered great damage such that our buildings on the Herran (Pedro Gil) campus side were in shambles, particularly the Annex building in which Dr. Narciso Cordero, a future department head, recounted seeing several skulls and bones. Among the debris, there was supposedly a full human skeleton with only Japanese shoes on. But amidst the ruins, the department was reborn under Dr. Emilio Bulatao (1945-1957). (Figure 2) Described as a simple man, Dr. Bulatao was very soft-spoken such that listeners had to strain hard to hear what he was saying or was that just campus subterfuge for the rumored great disdain towards his conferences that notoriously forced students to exercise rational thinking beyond their usual capacities? During the war, among his remaining staff were Dr. Narciso Cordero, Dr. Wenceslao Pascual, Dr. Solita Camara-Besa, Dr. Francisco Roque, Dr. Jesus Nolasco and Professor Delfin Samson. As the story goes, when the liberation forces eventually arrived, it was only Dr. Camara-Besa in her eighth month of pregnancy left holding the fort with Dr. Bulatao. (Figure 3)



**Figure 2: Dr. Emilio Bulatao (1945-1957) was Department Chair during the post-WW II era.**



**Figure 4: Dr. Narciso Cordero (1957-1962) was a prolific researcher and model academician.**



**Figure 3: Group picture at the Medical Annex Building front steps with Dr. Emilio Bulatao (third from the right) and Dr. Solita Camara-Besa (second from the left).**

In August 1953, Dean Agerico B. M. Sison approved the formal division of the department into the Department of Biochemistry and the Department of Physiology. The former was then headed by the newly returned Dr. Juan Salcedo, acknowledged as the Father of Philippine Biochemistry, and the latter under Dr. Narciso Cordero (1957-1962). Dr. Cordero was in the top three of his class and a medical board exam topnotcher who joined the department right after graduation. A prolific researcher and a model academician of his time. His benchmark article entitled *Philippine physiological standards: body weight in relation to height and age for adults*,<sup>11</sup> performed in collaboration with other physiology faculty members, was just one example of his many scientific endeavors. An interesting anecdote behind this particular article, was retold by Filipino historian Ambeth Ocampo,<sup>12</sup> and relayed how Dr. Cordero generated a part of his 6,000 adult sample data in Quiapo church by positioning a height and weight scale at the foot of the stairs where the Black Nazarene was venerated.<sup>13</sup>(Figure 4)

Upon Dr. Cordero's retirement, Dr. Espiridion C. Reyes, for whom the College's Physiology Memorial Medal was named, briefly led the department for four months in 1962. (Figure 5) He was a Neurophysiologist who studied at the University of Pennsylvania under Dr. John Brobeck, a renowned expert on the body's regulation of food intake by the central nervous system.<sup>13-15</sup> During his short stint as Chair, Dr. Reyes essentially restructured the department into academic faculty divisions based on the various organ systems (i.e. Cardiovascular Physiology, Neurophysiology, etc.). Sadly, he died in a plane crash on July 19, 1962 while enroute to a study leave in Sweden. He was one of 26 passengers and crew aboard United Arab Airlines Flight 869 that crashed into the Khao Yai mountain range in Bangkok.<sup>16</sup> There were no survivors. His successor was Dr. Santiago V. Guzman (1962-1970). Dr. Guzman was best known for setting up the Cardiovascular Laboratory of the department and for his numerous researches on cardiophysiology which partly led to his appointment as Head of the Research Division of the Philippine Heart Center in 1975.(Figure 6)

#### *Legends and Servants of the People (1975 onwards)*

All the department chairs that followed those of our great and glorious past continued to serve as clinical achievers and community leaders in the forefront of their respective fields: Dr. Augusto D. Litonjua (1970-1975), Dr. Zenaida G. Bagabaldo (1975-1985), Dr. Bayani V. Baylon<sup>+</sup> (1985-1988), Dr. Cecilia V. Tomas (1988-1994), Dr. Xenia T. Tigno (1994-2001), Dr. Dolores D. Bonzon (2001-2004), Dr. Ma. Salome N. Vios (2004-2009), Dr. Camilo C. Roa, Jr. (2010-2012), Dr. Elizabeth S. Montemayor (2013-2019), and Dr. Leticia T. Ibañez (2019 - 2022). Now in our 70<sup>th</sup> year as a standalone department and the 2023 recipient of the Silver Cup for the Basic Sciences, Physiology remains formidable in the College of Medicine. With its newly renovated teaching and laboratory facilities, and recent reinfusion of new faculty, the department under its current Chair, Dr. D. Darwin A. Dasig (2022-Present), shall carry on its time honored tradition of excellence in education and research towards achieving optimal healthcare for all.





Figure 5: Dr. Espiridion C. Reyes (1962) died in a plane crash on July 19, 1962 while enroute to a study leave in Sweden.



Figure 6: Dr. Santiago V. Guzman (1962-1970) was best known for setting up the Cardiovascular Laboratory of the department and for his numerous researches on cardiophysiology.

## REFERENCES

1. Tomas CV. Physiology: looking back in time. Department of Physiology Renovation Inaugural Speech. August 16, 2023. University of the Philippines, College of Medicine, Manila.

2. Aron H and Hocson F. Rice as food: Investigation of the nitrogen and phosphorus metabolism on a diet consisting principally of rice and other vegetable foodstuffs. *Phil J Sci* (1911) 6: 361.
3. Aron H. Phosphorus starvation with special reference to beri-beri. *Phil J Sci* (1910), v, B: 81-97.
4. Anderson, W. (1992). "Where Every Prospect Pleases and Only Man Is Vile": Laboratory Medicine as Colonial Discourse. *Critical Inquiry*, 18(3), 506-529. <http://www.jstor.org/stable/1343814>
5. Shaklee AO. Experimental Acclimatization to the Tropical Sun. *Phil J Sci* (1917) 12: 1-22.
6. Gibson RB. On the nature of the so-called artificial globulin. *J Biol Chem* (1912) 12: 61-64.
7. Moralina A. The University of the Philippines Institute of Hygiene and the Rise of a Filipino Sanitarian Regime: Some Provisional Notes. Research Report for the Rockefeller Archives Research Stipend Program (2018). DOI: 10.13140/RG.2.2.36266.77766.
8. Concepcion I. The nutritive cost of the Philippine constabulary ration. *Phil J Sci* (1937) 62: 89-114.
9. Concepcion I. A study of the food intake of the inmates of Welfareville. *Phil Med Assoc J* (1937) 17: 197-210.
10. Concepcion I and Samson DD. A study of the nutritive value and cost of the fiambreira luncheon. *UP Nat App Sci Bull* (1931) 1: 257.
11. Cordero N, Javier BV, Paulino Gonzalez CM, Bagabaldo ZB and Rodriguez-Busuego M. Philippine physiological standards: body weight in relation to height and age for adults. *Acta medica Philippina* (1956) 13(1-4), 417-440.
12. Ocampo A. What is history without a story? The Inquirer. <https://opinion.inquirer.net/128583/what-is-history-without-a-story#ixzz8QBxii900>
13. Brobeck JR. Neural control of hunger, appetite, and satiety. *The Yale journal of biology and medicine* (1957) 29(6): 565-574.
14. Brobeck JR. Neural factors in obesity. *Bulletin of the New York Academy of Medicine* (1957)33(11): 762-770.
15. Brobeck JR. Food intake as a mechanism of temperature regulation. *The Yale journal of biology and medicine* (1948) 20(6): 545-552.
16. United Arab Airlines, Comet 4C, SU-AMW, accident 52 NM northeast of Bangkok Airport, Thailand, on 19 July 1962. Report released by the Director, Aviation Administration, Department of Transport, Thailand, 15 November 1963 (PDF). *ICAO Circular: Aircraft Accident Digest. II (14): 101-103. 1966.*