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EWIC PUBLIC OUTREACH PROJECT

EWIC thanks the Henry Luce Foundation for its support of this project

**EWIC Staff Concept Note: North African Women: Science in Higher Education**

The fields of science, technology, engineering and math (STEM) have historically been dominated by men. In the United States of America, 17 percent of chemical engineers and 22 percent of environmental scientist are women.<sup>1</sup> On an international scale, women who choose to pursue vocational or educational careers in these areas are hindered by a common set of disadvantages: a shortage of mentors, a lack of acceptance from coworkers and supervisors, and sexual discrimination within the workplace.

Despite these obstacles many Middle Eastern women surpass not only their male colleagues but also female scientists in Germany and the United Kingdom in receiving science degrees. UNESCO defines female researchers as “a percentage of the total number” of researchers; this number includes part-time and full-time researchers. In Germany the total percentage of female researchers is 24.9%, while in the United Kingdom the number is 37.9%.<sup>2</sup> These percentages are either lower than or very close to their North African counterparts. In Tunisia female scientists constitute 47.4% of all science researchers, in Egypt 35.2%, in Sudan 40%, and in Algeria 34.8%. Women in these countries make up a total of one-third of researchers in all science fields.<sup>3</sup>

In Morocco 70% of students enrolled in science programs at university level are women.<sup>4</sup> A recent McKinsey & Company survey examining which universities were most likely to attract high-achieving women to degrees in STEM fields found that 37% of high-performing Moroccan women were likely to pursue STEM degrees which surpassed the 4% of women in the United States.<sup>5</sup> In Algeria, 52% of students studying science are women.<sup>6</sup> Algerian women surpass their male counterparts in the fields of science and medicine.<sup>7</sup> In Tunisia female graduate students represent three-quarters of students pursuing degrees in life sciences. Tunisian women are just as likely as men to pursue degrees in the physical sciences, with 51% of women pursuing such degrees.<sup>8</sup>

Each year fifteen international scientists are chosen for the annual L’Oreal-UNESCO award for Women in Science. In 2014, three were Arab and two were from North Africa. Adila Elobeid from Sudan received recognition for her work in neuropathy, and Farah Ouechtati from Tunisia for her work in neuroscience. Since 2010, the U.S. Department of State’s annual “Women in Science Hall of Fame” has honored women scientists throughout the Middle East and North Africa who have made outstanding contributions to their fields. Between 2010 and 2013, eight out of the 37 female scientists honored have been from the North African countries of Morocco, Tunisia, and Egypt.<sup>9</sup>

<sup>1</sup> <http://www.iseek.org/careers/womenstem.html>

<sup>2</sup> <http://www.scidev.net/global/gender/feature/the-struggle-to-connect-female-arab-scientists.html>

<sup>3</sup> <http://www.uis.unesco.org/FactSheets/Documents/sti-women-in-science-en.pdf>

<sup>4</sup> <http://www.nature.com/nmiddleeast/2013/130507/full/nmiddleeast.2013.67.html>

<sup>5</sup> [http://www.mckinsey.com/insights/social\\_sector/how\\_to\\_attract\\_us\\_women\\_to\\_the\\_sciences](http://www.mckinsey.com/insights/social_sector/how_to_attract_us_women_to_the_sciences)

<sup>6</sup> <http://www.aaas.org/page/profiles-women-ste-algeria>

<sup>7</sup> <http://www.nytimes.com/2007/05/26/world/africa/26iht-algeria.1.5876681.html?pagewanted=all>

<sup>8</sup> [http://www.un.org/womenwatch/daw/egm/gst\\_2010/Cheikh-EP.9-EGM-ST.pdf](http://www.un.org/womenwatch/daw/egm/gst_2010/Cheikh-EP.9-EGM-ST.pdf)

<sup>9</sup> <http://egypt.usembassy.gov/wis2013.html>