

Five Questions for Six Professional Ethiopian Women in Science and Technology

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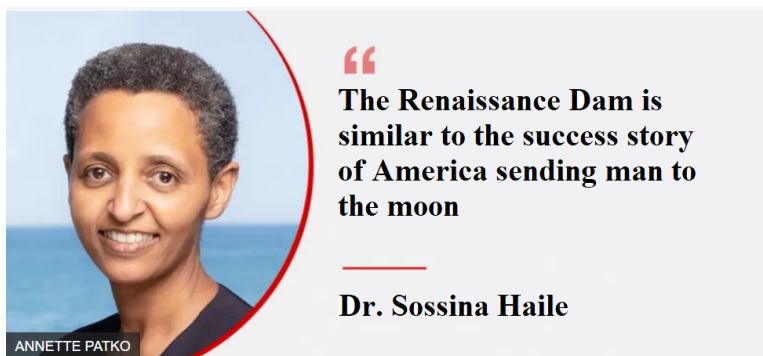


From top left: Dr. Sossina Haile, Betelhem Dessie, Dr. Ruth Diriba, Berhan Taye, Bethlehem Lakew and Hellina Hailu Nigatu

September 23, 2022 - Using the new Ethiopian calendar year of 2015 as a base, we asked five questions to six Ethiopian women in different fields of science.

"The Renaissance Dam is similar to the success story of America sending man to the moon" - Dr. Sossina Haile

Dr. Sossina Haile - Professor of Materials Science and Engineering at Northwestern University, Illinois, USA



In your field, what happened or was created in 2014 E.C. that impressed you?

My work is related with energy science. My main focus is electrochemical energy transformers.

The greatest surprise of my career is the Great Ethiopian Renaissance Dam. This is similar to America's success story of sending man to the moon.

What distinguishes the Renaissance Dam from the moon landing is that it not only convinced the world with science, but also lifted millions of people from energy poverty in the Horn of Africa without exacerbating the climate crisis.

What do you consider your greatest success from all the things you have accomplished in 2014 E.C.?

My biggest achievement last year was the establishment of a research center called 'Energy Frontiers Research Center', which was funded by the US Department of Energy.

Our work advances the world's understanding of hydrogen's interactions with solids. We got \$10 million for four years.

Our research lays the foundation for producing hydrogen by splitting water using electrical energy.

What is your plan for 2015 E.C?

Oh, my plans are many! Time is short! Publicly stating your plans without a concrete goal can also lead to failure.

My research team and I plan to find solutions to the barriers of using electricity to split water.

Like the Renaissance Dam, the idea is to generate electricity from carbon-free sources. The key is to produce hydrogen to use the electricity later.

What are three books that you read in 2014 E.C. and recommend to people? What are three movies you recommend?

No, I have nothing! I've been wanting to read Daniel Kahneman's "Thinking, Fast and Slow" but haven't had time to start it yet.

Generally, from scientific inventions or discoveries, which one surprised you the most? Why?

The images from the Web Space Telescope are absolutely stunning. Astrophysicists were able to travel back and see 13.7 billion years ago.

Our inquiry into how we came to be on this earth makes us different from other creatures on earth.

These images that tell us that the formation of galaxies have some spiritual power. I hope we can protect our Earth and pass it on to our grandchildren.

"There is no invention quite like the Internet" - Bethlehem Dessie

Bethlehem Dessie – iCOG – Anyone Can Code CEO and Computer Scientist



In your field, what happened or was created in 2014 E.C. that impressed you?

The artificial intelligence that transforms words, phrases and sentences into images is amazing.

AI also won a drawing competition. This sparks the question “Where are we going, without fully realizing it?”

What do you consider your greatest success from all the things you have accomplished in 2014 E.C.?

The highlight on my 2014 was being featured in a book called ‘Rebel Girls’. It was a longstanding dream of mine to appear in a children’s book.

Billie Eilish and Taylor Swift are also featured in the book I am in. So, it means they will buy it. When they buy it, it means I have reached where they are.

The book has sold 5 million copies so far. The greatest human achievement is to inspire other people.

What is your plan for 2015 E.C?

My plan for 2015 is to achieve what I have dreamed of since I was 13 years old. This is a mobile computing center. It is called 'Digi Track Ethiopia'.

It is a 40-foot container that is solar powered. It travels around the city teaching coding and robotics. I'm really, really looking forward to it.

What are three books that you read in 2014 E.C. and recommend to people? What are three movies you recommend?

Books that I would recommend:

Shoe Dog [Phil Knight]

21 Lessons for the 21st Century [Yuval Noah Harari]

The Thing Around Your Neck [Chimamanda Ngozi Adichie]

The movies I would recommend watching are 'The Gentlemen', 'Rick and Morty' and 'Love, Death & Robots'.

Generally, from scientific inventions or discoveries, which one surprised you the most? Why?

Internet! There is no question about it.

There is no invention like the Internet. Life changed. It enabled knowledge transfer. It has a huge impact on young people because of its wide reach and worldwide reach.

"Malaria vaccine is a discovery that gave me hope" - Dr. Ruth Diriba

Dr. Ruth Diriba - Last Mile Health Technical Consultant and Medical Expert



In your field, what happened or was created in 2014 E.C. that impressed you?

For more than a century, attempts have been made to find a vaccine for malaria. The vaccine was discovered and announced recently. As it has the ability to prevent up to 80% of malaria, it promises to reduce the number of children who die from the disease. In 2014, it was a discovery that surprised me and gave me hope.

What do you consider your greatest success from all the things you have accomplished in 2014 E.C.?

My biggest achievement was being involved in the design and implementation of the unique Blended Learning, a first-of-its-kind application by the Ministry of Health and Last Mile Health that provides digital training for health extension workers.

What is your plan for 2015 E.C?

If God wills it, in 2015, I have plans to participate in work that improves the health of children, and to do work that focuses on the community and health extension workers.

What are three books that you read in 2014 E.C. and recommend to people? What are three movies you recommend?

Books that I would recommend:

Winning with People [John C. Maxwell]

The Checklist Manifesto [Atul Gawande]

Our Iceberg is Melting [Holger Rathgeber and John Kotter]

The movies that I would recommend are 'Fractured', 'Unforgivable' and 'Sweet girl'.

Generally, from scientific inventions or discoveries, which one surprised you the most? Why?

An invention that amazes me is a vaccine. By exposing the body to disease, pathogens, or substances as practice, it is a great innovation to prepare the body to prevent disease and reduce suffering and even death.

"I don't think there is a greater invention than printing" - Berhan Taye

Berhan Taye- Technology Policy Researcher and Analyst



In your field, what happened or was created in 2014 E.C. that impressed you?

What surprised me was the DotPlot app. This app is installed on the phone and monitors changes in the breast so that women can detect breast cancer early.

Although still awaiting approval from medical certifiers, such an app could help low-income women prevent breast cancer.

What do you consider your greatest success from all the things you have accomplished in 2014 E.C.?

My biggest success in 2014 was running 10 km while regularly exercising.

What is your plan for 2015 E.C?

My plan is to spend quality time with people I value and spend less time on the internet and more time talking to people.

What are three books that you read in 2014 E.C. and recommend to people? What are three movies you recommend?

Books that I would recommend:

Do Not Disturb: The Story of a Political Murder and an African Regime Gone Bad [Michela Wrong]

Seven and a Half Lessons About the Brain [Lisa Feldman Barrett]

Race after Technology [Ruha Benjamin]

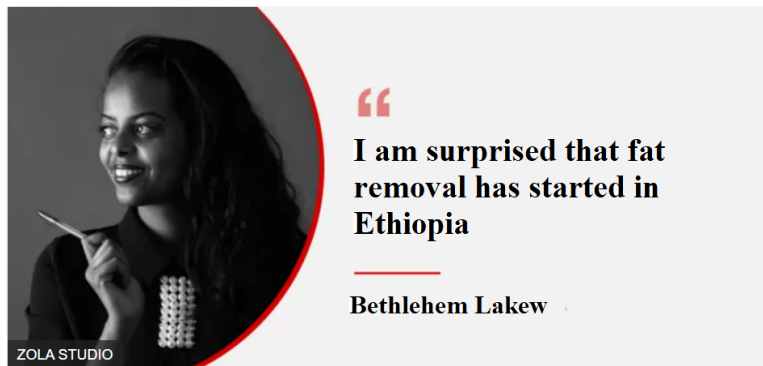
I don't watch feature films much. But let me suggest series shows. These are 'Paper Girls', 'Veep' and 'The Office'.

Generally, from scientific inventions or discoveries, which one surprised you the most? Why?

I don't think there is anything greater invention than printing. It is printing that gave us life.

"I am surprised that fat removal has started in Ethiopia" Bethlehem Lakew

Bethlehem Lakew – Founder of LeHem Nutrition, Co-founder and CTO of Benu Foods, Act4Food Act4Change Campaign Leader and Nutritionist



In your field, what happened or was created in 2014 E.C. that impressed you?

Fat Removal has started in Ethiopia. I did not expect that this process would enter our country so soon. I was very surprised.

What do you consider your greatest success from all the things you have accomplished in 2014 E.C.?

I was doing various jobs as a representative of the Ethiopian youth of the international 'Act4Food Act4Change' campaign in 2014. It was very successful.

What is your plan for 2015 E.C?

LeHem was operating on a small scale. But eventually in 2014, we grew, rented an office and started working. The business has been around for a while. Together with our partners, we plan to grow into a clinic, in 2015.

What are three books that you read in 2014 E.C. and recommend to people? What are three movies you recommend?

Books that I would recommend:

‘The Little Church’ (ትንሿ ቤተክርስቲያን) [Gebregziabher Kidan]

Zero to One [Peter Thiel]

‘Medicine in our homes’ (ሕክምና በቤታችን) [Bekelech Tola]

I don't watch movies. Let me tell you three places I think you should visit instead. Lalibela, Axum and Rwanda's 'Kigali Genocide Memorial'.

Generally, from scientific inventions or discoveries, which one surprised you the most? Why?

Endoscopy procedures always amazes me. It's certainly not a complicated science. With the current equipment, it can easily be used in any hospital.

It allows us to see an individual's internal processes without having to open them up. Being able to do laboratory tests and see blood cells is a great discovery for our time.

“I am fascinated by organ transplants.” - Hellina Hailu Nigatu

Hellina Hailu Nigatu - Second Year Computer Science PhD Student at University of California, Berkeley



In your field, what happened or was created in 2014 E.C. that impressed you?

In 2014, one of the innovations that impressed me was the quality of the images generated by the AI model. These models are widely used.

On the one hand, it amazes me when artists like Benno Samuel make art with the help of technology. On the other hand, the dangers of technology that is not properly regulated concerns me.

What do you consider your greatest success from all the things you have accomplished in 2014 E.C.?

My biggest achievement was winning a Computational and Data Science Fellowship at the Association for Computing Machinery Institute.

What is your plan for 2015 E.C?

In 2015, I am in my second year of PhD studies at UC Berkeley. My plan is to work together with my African colleagues to benefit our society.

What are three books that you read in 2014 E.C. and recommend to people? What are three movies you recommend?

Books that I would recommend:

All about Love [Bell Hooks]

Race After Technology [Ruha Benjamin]

Shadow King [Maaza Mengiste]

The movies that I would like to recommend are ‘Queen of Katwe’, ‘Us’ and ‘My Shepherd’ (እረኞፍ)

Generally, from scientific inventions or discoveries, which one surprised you the most? Why?

If I had to choose one invention, organ transplants amaze me. Why? It is clear. Because it saves people's lives.